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ABSTRACT

This document discusses legal considerations in the identification of Michigan students with learning disabilities and suggests guidelines for meeting legal requirements in a systematic and consistent manner. An introduction outlines issues and problems related to the assessment of learning disabilities and provides a rationale for the importance of consistency in learning disability determination. Basic procedures are recommended to ensure an effective identification process in the areas of prereferral guidelines, evaluation procedures, assessment of ability level, assessment of achievement, determination of discrepancy, exclusionary factors, and 3-year re-evaluations and exit criteria. Appendixes include a discussion of the technical adequacy of evaluation instruments and an evaluation checklist as well as elaborations meant to clarify the guidelines given in the text (e.g., pre-referral elaborations, achievement elaborations, etc.). (Contains 33 references.) (JDD)

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Guidelines for Identification and Evaluation of Students with Learning Disabilities

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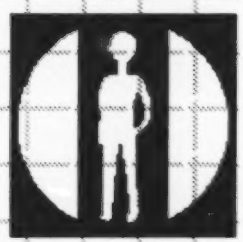

The Michigan Association of Learning Disabilities Educators

January, 1992

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Guidelines
for
Identification and Evaluation
of
Students with Learning Disabilities

MALDE

R. Hunt Riegel, Ph. D.
Institute Director & Editor

This document has been developed by the Michigan Association of Learning Disabilities Educators with partial funding and printing by the Livingston Education Service Agency CSPD State Initiated Project. The contents of this document do not necessarily represent the opinions of the Michigan Department of Education.

Table of Contents

Introduction i

Acknowledgments iii

Participants iv

The Guidelines 1

Appendices 25

Appendix A. Pre-Referral Elaborations 27

Appendix B. Technical Adequacy of Evaluation Instruments 30

Appendix C. Ability Elaborations 32

Appendix D. Achievement Elaborations 41

Appendix E. Severe Discrepancy Elaborations 49

Appendix F. Exclusionary Clause Elaborations 55

Appendix G. Evaluation Checklist 60

Appendix H. General References 63

Guidelines for Identification and Evaluation of Students with Learning Disabilities

R. Hunt Riegel, Ph. D., Editor

The guidelines contained in this document are the result of the collective efforts of a large number of people throughout Michigan working in the area of learning disabilities.

In 1980 an institute was conducted to develop guidelines for the identification of students with learning disabilities in Michigan. Funded through the Michigan Department of Education, the result of this institute was a widely disseminated document, *Considerations for Identifying School Age Children and Youth with Specific Learning Disabilities in Michigan: A Final Institute Report.* Lansing: Michigan Department of Education, 1980. (96 pp.)

In the original institute, teams from each of the 22 REMC regions included an ISD representative (a person involved in inservice activities), and four members from a local education agency. The four members were chosen to reflect a typical multi-disciplinary team, including a diagnostic person (school psychologist or LD teacher consultant), a special education administrator, and two other persons involved in the determination of learning disabilities at the local level. In addition to the 22 teams, other participants included representatives of university training programs in special education and in school psychology, and five parents of students with learning disabilities.

The current project involved inviting a subset of the above to review, revise and make recommendations regarding updating the 1980 document to serve as a resource guide in the 1990's. This involved identifying representatives from each of the 22 regions (2 per region), two representatives from each of the major professional and parent organizations most involved with students with learning disabilities (MALDE; MASP; MATEDC; MSHA; SESOM; MAASE; LDA), two representatives of institutions of higher education teacher training programs, and four parents of students with learning disabilities. The resulting group of approximately 70 persons reviewed materials in preparation for a one-day working institute to identify areas in need of revision and recommendations for issues to be clarified.

A review of all ISD plans for the delivery of special education programs and services was conducted in May, 1991. This review, which focused on procedures for the identification of students with learning disabilities, resulted in the following findings:

- The vast majority of ISD plans addressed the identification of LD at a general level, with thirty-six plans incorporating the basic state rules only.

- Twenty ISD plans addressed one or more of the areas related to evaluation more specifically, with eighteen specifying a point value to be used in determining severe discrepancy, and two stipulating some form of pre-referral process to be used prior to consideration of LD.

A one-day working session provided the venue in which both small group and whole group communication produced a set of priorities which a smaller editorial committee then worked into a revised set of guidelines for review by the participants and ultimate dissemination through SES and MALDE's Information Services.

Each participant received a copy of the original document, *Considerations for Identifying School Age Children and Youth with Specific Learning Disabilities in Michigan: A Final Institute Report.* Michigan Department of Education, 1980. (96 pp.). The MALDE institute document of 1989 was sent to each participant for additional preparation, along with a copy of the results of the editorial panel's cross-referencing of ISD plans regarding identification of learning disabilities.

All participants were asked to review these documents and a copy of their own ISD Special Education Plan (sections pertaining to the identification of students with learning disabilities), with specific issues highlighted for their consideration, in preparation for the one-day meeting.

Purpose

To recommend changes to the 1980 document, *Considerations for Identifying School Age Children and Youth with Specific Learning Disabilities in Michigan: A Final Institute Report*, to provide a useful and up-to-date resource for persons in Michigan involved in identifying students with learning disabilities. This Institute assumes that the rules and regulations currently in place are those under which these considerations should be used. Our intent is not to recommend changes in the rules (in this forum), but rather to recommend how the rules can best be implemented regarding appropriate identification of students with learning disabilities.

Agenda

9:00	Introductions, overview and orientation to the institute
9:15	Small group recommendations: Ability
10:00	Small group recommendations: Achievement
10:45	Whole group: Reports of small group recommendations
11:30	Small group recommendations: Severe Discrepancy
12:00	Luncheon
1:00	Small group recommendations: Need for special education
1:20	Small group recommendations: Exclusionary clause
1:40	Whole group: Reports of small group recommendations
2:00	Small group recommendations (each participant will join one of three groups): • Pre-referral; • Three-year re-evaluations; or • Training & inservice.
2:45	Whole group: Reports of small group recommendations
3:00	Summary and conclusions

Acknowledgments

This document is the product of many hours of hard work by many people. It is impossible to recognize all of those who helped, but we would like to specifically express our appreciation to a few who went the extra distance to help with the final compilation of these recommendations.

First, we would like to acknowledge the leaders and participants of the original 1980 institutes for the prodigious efforts they put forth in generating the original Considerations. Susan Moore, Gary Hessler and Thom Buescher spearheaded a process which has held up remarkably well over time. And the nearly two hundred participants each contributed in a significant way to articulating a consensus document.

Second, we would like to thank all of the participants of the 1991 institute (see next page) for their time and willingness to study the many pages of preparatory materials sent to them and for their feedback, which helped us shape the meeting time into a more efficient and effective group process. Their willingness to grapple with the numerous complex and controversial issues in a forthright and objective manner is much appreciated.

We would also like to specifically thank the group facilitators and recorders for their extra efforts in making the institute as successful as it was. Gary Hessler, Dona Icabone, Dick Brazovich, Mike Beebe, Barb Vedder and Walt Lesiak were marvelous in their openness and willingness to help synthesize participants' comments, and Sue DeMeyer, Muriel Kaier, Thomas Lowe, Sheila Myron, Mary Jennings and Tim Krug were faithful in their recording and summarizing the comments made in a manner which allowed us to compile them into these guidelines. And Jan Henkel was invaluable in her assistance with the many on-site logistical management activities and decisions which had to be made.

We thank the staff and leadership of the Ingham Intermediate School District for their cooperation and willingness to let us use their facility as a meeting site.

And we are greatly indebted to Dr. Richard Baldwin and Mr. Theodore Beck of Special Education Services of the Michigan Department of Education for their support and assistance in making this institute possible.

Finally, we would like to express our sincere gratitude to three persons already mentioned for their unflagging support and time given to the reading, editing, re-reading and final review of this document. Sue DeMeyer, Muriel Kaier and Gary Hessler are due many thanks for their continuing efforts on behalf of learning disabilities educators.

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Guidelines for Identifying and Evaluating Students with Learning Disabilities

Michigan Association of Learning Disabilities Educators

The identification of students with specific learning disabilities in Michigan's schools has been a complicated problem since the late 1960's. Beginning in 1971 with P. A. 198, the various definitions of learning disabilities that were employed to identify students for special programs and services created confusion across local school districts. Children certified in one district for services could be unrecognized as having a disability in another district. This situation was somewhat alleviated in 1975 when Public Law 94-142 outlined general guidelines for identifying children with specific learning handicaps throughout the United States. Since that time, the parents, educators, administrators and professional organizations in Michigan concerned about the learning disabled have worked to develop a definition of learning disabilities consistent with P.L. 94-142.

After several years of intensive study and pressure, a final version of the definition and appropriate services required was accepted by the Michigan Legislature in August, 1980. The description of learning disabilities in Michigan now closely parallels the Federal concept of specific learning disabilities and allows for greater consistency in certifying and serving school-age children with severe learning difficulties.

Use of this Document

The purpose of the document is to present the areas of consideration the law requires regarding identifying students with learning disabilities, and suggested guidelines for meeting those requirements in a systematic and consistent manner. The primary set of guidelines recommended by MALDE, based on the several institutes it has conducted over the past three years, is found on pages 5 through 17. These are the basic procedures and considerations which are recommended to ensure a consistent and effective identification process.

We have also included a number of Appendixes with these guidelines. The Appendix is not a part of the recommended guidelines: It is intended to provide background information, clarification, additional resources, and lists of instruments in use at this time. Much of the material included in the Appendix has been requested by various institute participants, and is included for informational purposes only. Some of the material in the Appendix will become outdated rapidly, and the reader is cautioned to exercise good professional judgement when using this material.

The document presented here reflects the deliberate thinking, study and experience of several hundred educators, psychologists, parents and administrators in Michigan. The discussion of learning disabilities by this group provides a strong base for examining the particular practices and programs used by local school districts to assess and identify students with learning disabilities. It is hoped that this document will be a useful guide for improving the consistent consideration of children for learning disabilities programs.

A complete statement of the current definition follows and is the basis for this document

Michigan Administrative Rules for Special Education

As Authorized Under Public Act 451

R 340.1713 "Specific learning disability" defined; determination.

Rule 13.

(1) "Specific learning disability" means a disorder in 1 or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

(2) The individualized educational planning committee may determine that a child has a specific learning disability if the child does not achieve commensurate with his or her age and ability levels in 1 or more of the areas listed in this subrule, when provided with learning experiences appropriate for the child's age and ability levels, and if the multi-disciplinary evaluation team finds that a child has a severe discrepancy between achievement and intellectual ability in 1 or more of the following areas:

(a) Oral expression.
(b) Listening comprehension.
(c) Written expression.
(d) Basic reading skill.
(e) Reading comprehension.
(f) Mathematics calculation.
(g) Mathematics reasoning.

(3) The individualized educational planning committee may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of any of the following:

(a) A visual, hearing, or motor handicap
(b) Mental retardation
(c) Emotional disturbance
(d) Autism
(e) Environmental, cultural, or economic disadvantage

(4) A determination of impairment shall be based upon a comprehensive evaluation by a multi-disciplinary evaluation team which shall include at least both of the following:

(a) The child's regular teacher or, if the child does not have a regular teacher, a regular classroom teacher qualified to teach a child of his or her age or, for a child of less than school age, an individual qualified by the state educational agency to teach a child of his or her age.
(b) At least 1 person qualified to conduct individual diagnostic examinations of children, such as a school psychologist, a teacher of the speech and language impaired, or a teacher consultant.

There are a number of prevailing issues and problems related to the assessment of the learning disabled. The number of students with learning disabilities (LD) continues to grow, and there is great variation in the percentages of persons who are identified LD. In one Michigan county, for example, while approximately 4.5 to 5 percent of students are certified LD, the percentages range from 3 percent to 9 percent among the local school districts. Unfortunately, this variation is not unique to this county. Furthermore, large numbers of students are certified as LD who do not meet the criteria. As an example, Clarizio and Phillips (1986) have reported that less than 55 percent of a sample of LD students in Michigan have a reliable severe discrepancy. This is disconcerting, since the notion of severe discrepancy is currently fundamental to the concept of learning disabilities.

As indicated by a mini-conference held by MALDE a few years ago, there is a big difference among school districts in terms of how the learning disabled are operationally defined for identification purposes. There appear to be at least four reasons for these inconsistencies. First, there is significant confusion regarding the nature of LD. That is, personnel tend to have a different understanding of the nature of LD, depending upon their discipline, and era and place of training. For example, medical personnel usually consider LD to be a neurological condition resulting in dyslexia, dysgraphia, or dyscalculia, psychologists usually consider LD to be more of a learning process disorder determined through the use of psychometric instruments (i.e., they look for inter- and intra-test scatter), teachers of the speech and language impaired usually perceive LD from the perspective of language problems, and special education personnel perceive it from the perspective of academic achievement problems.

Second, many terms in the present state and federal definitions for LD are vague and undefined. Terms such as "intellectual ability level," "severe discrepancy," "reading comprehension," "written expression," and "adequate educational opportunity" are examples of some of the terms that are unclear. As a result, personnel operationalize these terms differently, which results in different samples of students identified as LD.

The third reason for the inconsistency relates to the indiscriminate and inappropriate use of tests. More personnel and agencies are involved in the assessment process than ever before. While this has the advantage of representing a multi-disciplinary perspective on assessment, it also introduces problems related to quality control. For example, inaccurately administered or scored tests or use of technically inadequate tests, will often provide different performance levels than accurately administered or scored tests, or use of technically adequate tests. This will obviously result in uncertainty and inconsistency in the determination process.

The final barrier to consistent determination is bias. Internal and external influences have a profound effect on the determination of learning disabilities. For example, when parents bring advocates or attorneys to IEPC's, the probability increases that the parents will achieve their goal for their son or daughter whether or not established criteria are met. Likewise, if a student has an advocate within the system who is influential (such as a school board member or principal), it becomes more likely the student will receive services. Other factors related to such things as referral procedures and availability of services are also influential, and it is quite clear that more than established criteria play a part in determining who is or is not LD.

All this suggests that more defined, clear, and consistent procedures are necessary if the determination of LD is to be equitable, consistent, and technically and conceptually adequate. There are at least four reasons why consistency in LD determination is important. The first (but not necessarily the most important) is legal. Use of inconsistent determination procedures has important legal implications for a variety of reasons. For example, if a school district has identified students as learning disabled by using inconsistent and arbitrary standards, they are less likely to be able to defend a position they assume for not certifying an individual as LD. Furthermore, who is to say that an individual who has been certified LD through use of arbitrary standards will not later legally challenge a school district for mis-identification?

A second reason is economic. There are only a finite number of dollars to spend on LD programs. If we are to use these dollars judiciously, we must make sure that the students who we serve are in fact LD. If we serve students who are not LD, programs will continue to be watered down and less effective.

The third, and perhaps the most important reason, is a humane one, since LD certification often has a profound effect on an individual. Virtually immediately upon certification, other persons' perceptions of a student changes, and usually these perceptions become more negative. For example, teachers often perceive the student with LD as one whose needs cannot be met in the regular classroom, even though that same teacher may have been working with the student for a long while already.

A fourth reason for the need for consistency is related to the validity and integrity of the field. Since we, as a field, have not been careful in terms of who we certify as LD, it is easy to develop an argument that LD "is not real". This is true because we have certified such a wide variety of students as LD that they, as a group, are not qualitatively different from other groups of students such as Chapter I, bilingual, slow learners and the like. Many have confused the problems with identifying the learning disabled with the validity of the construct. Thus, we must be very certain that students who are certified are in fact LD and those who we do not certify are not LD, given our present rules and criteria. This will help protect the integrity of the field and ensure that those who require special education receive it.

Pre-Referral Guidelines

Pre-referral strategies are an important part of helping to determine the need for special education. The development of such strategies should be district policy and should be used consistently. While they should be comprehensive, they should not be so cumbersome and difficult to utilize that they discourage the referral of students who are problematic.

P.L. 94-142 specifically directs the multi-disciplinary evaluation team to ascertain whether services in special education are required to address the needs associated with a student's identified severe discrepancy. This provision of the law does not seek to deny services when they are needed, but realistically asks the team (and the school district) to guarantee that appropriate alternative learning experiences have been tried within the student's educational program before any further determination is made about the existence of a specific disability.

Recommended steps in the pre-referral process are listed below (additional suggestions can be found in Appendix A). It is important to remember that the information generated during this process is fundamental to the IEP Committee's being able to determine if special education services are necessary for an individual student.

I-A A building-level professional support team process should be utilized prior to consideration of a referral for special education. This process might be one of a number of approaches, including the child study team, teacher assistance teams, cooperative consultation, student support staffings, and the like, but should include a number of information gathering and alternative intervention options. (In this section we will refer to the pre-referral team as the child study team, or CST, regardless of the particular approach a district may select.)

A pre-referral team should be used

I-B The composition of the child study team is determined by the building staff and administrators. However, it is recommended that the following general and special education building level staff members be considered for all child study meetings: an administrator; the student's regular education teacher(s); a special education staff member responsible for recommending intervention practices to regular education staff; a special education person involved in assessments; ancillary special education and regular education personnel who have information regarding the student; it would also be helpful for the school psychologist to attend child study meetings.

Members of the pre-referral team

The classroom teacher should inform and interview the parents regarding the student's problem(s) prior to a child study meeting. Parents should be informed that their child will be discussed at a child study meeting, and should be invited to attend the meeting. Parents should be informed along the way about the outcome(s) of child study meetings. Parents and professionals should also be aware that they can consult special education staff members without a special education referral as a part of the child study process.

Specify effort needed

I-C The child study team should specify the length of time that each recommended alternative should be implemented before it is determined to be ineffective. In addition, the number of alternatives to be implemented prior to referral for special education programs and services should also be determined by the child study team.

At the pre-referral level, a review of the student's cumulative file should be conducted, the student's problems need to be identified, qualitative information needs to be collected, pre- and post-intervention data should be kept, and the problem(s) should be addressed within regular education. Alternatives and recommendations should be discussed regarding programs, materials, etc. to be used in the regular education classroom. The intervention methods should meet criteria set by the CST. All interventions should be well documented over a reasonable period of time, as determined by the CST. The CST should convene, document successes and failures, review information presented regarding the student's progress, reconvene, document, review, etc. until the team determines that a referral to special education is in order.

The CST should clearly document that the curriculum being presented to the student is at his or her instructional level. Good intervention methods should be used as a "test", which can help shed light on the nature of the student's difficulties.

Need for special education should be established

I-D The possible need for special education should naturally be established before a referral for services is made. Such a need should be predicated on a number of factors, including the following:

a. Shared responsibilities have been identified in which regular educators have had an opportunity to problem solve with others in a consultation relationship to identify alternatives which can be tried for the student. Such alternative pre-referral strategies as teacher assistance teams, child study teams, cooperative teaching, cooperative or collaborative consultation and the like are options which may be provided by districts at this point in the process.

b. Support systems for educating students in the least restrictive environment are in place, including clearly delineated cooperative efforts between regular educators and support staff who can assist in identifying alternatives which might be tried.

c. Instructional alternatives have been tried for a sufficient period of time to determine that adaptation within the regular education instructional program is insufficient to meet the needs of the student.

There is no consistency of grade marking in regular education, and grades are not good predictors of a need for special education. Grading involves a high level of subjectivity, and should be considered as only one part of a larger body of information used to determine a need for special education.

I-E After the guidelines above have been implemented and the CST determines that further such attempts would be ineffective, a referral for special education should be made.

Refer only if needed

I-F The child study team should be responsible for documenting the efforts which have been made and which have led to the conclusion that there may be a need for special education. All data collected at the pre-referral level should be included in the multi-disciplinary evaluation team report.

Document what has been tried

Evaluation Procedures and Considerations

To effectively evaluate a student suspected of having a learning disability, a team effort is required. A multiplicity of factors must be considered to determine whether a learning disability exists, and these factors should be considered from a variety of viewpoints.

While a multi-disciplinary team process is required as an overall strategy to determine eligibility for special education, the key components of defining a learning disability pose some unique dilemmas which call for comprehensive measures. Several specific components of the definition of learning disabilities call for a multi-disciplinary approach in and of themselves. For example, it is recommended that the student's ability level (see next section) be determined after taking into account a variety of different sources of information. Adequate analysis of this information will call for more than one professional perspective.

The MET responsibility

II-A In order to determine if special education services are warranted and required for an individual child, the multi-disciplinary evaluation team should consider three particular issues related to the student's past and present school history:

1. Whether there is a severe discrepancy between ability and achievement when the child is provided with appropriate alternative learning experiences commensurate with age and ability;

2. Whether appropriate alternative learning experiences, including alternative teaching materials and methods, have been attempted with the child prior to an IEPC meeting; and

3. Whether sufficient documentation has been collected for the multi-disciplinary team to weigh and determine the need for special education and related services.

All data collected at the pre-referral level should be included in the multi-disciplinary evaluation team report.

Use adequate measures

II-B All instrumentation used in evaluating students suspected of having a learning disability should be technically adequate and educationally relevant. This means that basic minimal standards of reliability and validity should be met by the instruments and that they should reflect adequately the educational experiences to which the student has been exposed.

Appendix B provides additional information regarding technical adequacy of measures.

Instruments should be administered by qualified professionals who have been properly trained in their use and authorized to render professional judgements based on their results.

If competency- or curriculum-based assessment instruments are used as a part of the determination of learning disabilities, norm references should be available for those instruments so that appropriate interpretive comparisons can be made.

II-C The degree and amount of other information needed to establish one's ability level is determined by the multi-disciplinary team and/or IEPC depending upon the characteristics of the student under consideration. It is recommended that the determination of ability be based on procedures which support and verify individual test results through the use of additional formal and informal instrumentation and observation procedures. Observations should include specific information regarding adaptive behavior, achievement in all areas in regular education (especially in the deficit areas), ability in all areas in regular education, attention factors, academic history, and strengths and weaknesses within the curriculum presented to him or her.

Consider a variety of factors

Because ability level is defined as the prediction of how well one should be able to adapt and function in the learning environment, it is important to consider as much information as reasonable regarding the student's cognitive and adaptive performances, such as social competence, verbal thought, non-verbal thought, academic achievement, fund of general knowledge, adaptive behavior, abstract reasoning, and specialized abilities. The primary goal of the multi-disciplinary team is to compile as reasonable a representation as possible of a student's level of performance in a wide range of cognitive and adaptive areas before determining his or her level of ability.

In addition to treating the entire evaluation process as multi-disciplinary, with various perspectives being pooled at the time of the IEP meeting, it is recommended that the multi-disciplinary nature of the evaluation begin with the determination of the student's ability. All pertinent sources of information should be synthesized in making the determination of ability. Specifically, in addition to a psychometric evaluation, language proficiency, educational opportunities and classroom performance should be included in this determination.

Ability Level

Perhaps the most critical dimension to any assessment component for determining learning disabilities is the establishment of a particular student's ability level. Historically, ability level was viewed solely in terms of a person's intellectual functioning as compared to age expectancy, the so-called IQ (Intelligence Quotient). In considering learning disabilities, this notion must be broadened to include more comprehensive factors.

For the purpose of determining learning disabilities, "ability level" is defined as the prediction of person's relative overall capacity to adapt and function in the learning environment. Ability level includes a variety of factors including general intellectual ability, specific cognitive abilities and adaptive behaviors displayed in school, home and social relationships.

Use a test of intelligence if possible

III-A While it is the multi-disciplinary evaluation team's responsibility to determine the procedures necessary to assess an individual's ability level, use of an individual intelligence test, administered by a psychologist, is recommended in all cases where a student is suspected of being learning disabled. Exceptions to this requirement would be cases where it is simply not possible to acquire valid IQ scores, such as students with severe distractibility, hyperactivity or language problems. Exceptions would also be made in situations in which the use of IQ tests would be judged discriminatory. In these cases, reliance on performance levels obtained from other procedures would be necessary.

The rationale for this recommendation is that intelligence tests continue to be the best available single indicators of intellectual functioning. They predict academic achievement fairly well, and, for these reasons, have withstood the test of time (Kaufman, 1979).

Global scores should not be used alone

III-B In using IQ tests, or for that matter any procedure, it is important that one use technically adequate devices. Global IQ scores (e.g., Verbal I.Q., Performance IQ, Full Scale IQ) should never be used as the sole indicator of ability level; additional procedures such as intra-test analysis and alternate techniques or procedures (see Appendix C for examples) should also be employed.

There are a number of characteristics of intelligence tests which speak against their use as an isolated measure of ability level. For example, intelligence tests:

(1) measure previous learning; therefore, they must be considered culture biased and are not always an index of "ability" or "potential" (Kaufman, 1979);

(2) are not, by themselves, estimates of one's total intellectual functioning (Kaufman, 1979);

(3) measure intellectual processes in a fixed experimental condition, and therefore do not indicate one's abilities when assistance and cues are provided (Kaufman, 1979);

(4) may provide an invalid indication of the abilities of a student with learning disabilities, since the very existence of learning disabilities may preclude the valid measurement of intelligence; (e.g., global IQs may not provide a valid indication of ability level in students with discrepancies and variations in their cognitive performance) (Danielson & Bauer, 1978);

(5) have not changed with the advent of important advances in psychology; the important contributions of such educational psychologists as Piaget, Gagné or Guilford have not been reflected in intelligence test content or structure (Kaufman, 1979); and

(6) have not incorporated important information provided by neuropsychology; they do not fairly measure the specialized abilities of the cerebral hemispheres (the functions of the right hemisphere are especially under-represented), the integration between them, and the ability to shift from one hemisphere to the other, depending upon the nature of the task (Kaufman, 1979).

Two approaches to evaluating ability should be considered: Formal evaluation, and informal assessment coupled with clinical judgement[1].

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[1] Clinical judgement is a phrase used to describe the result of a decision making process based on a constellation of observed factors. When considered in the context of sound psychological and instructional principles these factors can be demonstrated to have an overall influence on the learning abilities of the individual which can be described in terms of the overall ability of the individual to respond effectively to educational stimuli presented. While elusive in its precise definition, clinical judgement is an important component of the evaluation process. When cited as one of the bases for determining ability, however, it should be stressed that such judgement must be founded on documentable evidence accompanied by a reasonable and readily understood rationale.

Use predictive measures

III-C One purpose of evaluating ability should be to predict what a student's "true" achievement capabilities are. This prediction should be made in the context of a global cognitive description of the student, including both observational data and historical information about the student's functioning and experiences.

When it is felt that the student being evaluated has language or processing problems, a teacher of the speech and language impaired should be assigned as a member of the multi-disciplinary evaluation team.

Select the best predictor

III-D Of the scores available, those most appropriate for predicting the student's achievement should be used when determining whether a severe discrepancy exists, and descriptive data should identify as precisely as possible the specific skill deficiencies which appear to be inhibiting the student's achievement.

It is important to make the distinction between scores which yield a cognitive functioning level for determining whether a mental impairment exists (e.g., IQ scores), and scores used to determine whether a student should be achieving at a significantly higher level (i.e., that a severe discrepancy exists). The latter calls for an instrument that is an established predictor of achievement.

Consider cultural and language differences

III-E Cultural differences and bilingualism should be addressed through specific strategies which include alternative assessment procedures and consideration of the stage of primary language acquisition attained, as well as the student's second language proficiency. Evaluators should take particular care to seek additional corroborating evidence of a student's ability during the transition phase in bilingualism, when depression of scores in both languages might be expected. Reference to special considerations for limited-English proficient students should be made in these cases (see Brazovich, et al. in references.).

Areas of Achievement

The key principle underlying the current definition of learning disabilities is that of a severe discrepancy between a particular student's ability level and his or her achievement in the school setting. The seven achievement areas defined in the federal and state rules include:

(l) Oral expression (the ability to express oneself utilizing vocal speech and language);

(2) Listening comprehension (the ability to receive and to understand spoken utterances);

(3) Basic reading skills (those fundamental reading skills, processes, and strategies required for identifying clues significant for meaning in written text and for attaining comprehension skills);

(4) Reading comprehension (the process by which the ideas and meaning intended by the author are constructed by the reader);

(5) Written expression (the ability to use one's own graphic symbol system to clearly communicate ideas, thoughts and feelings in a meaningful way);

(6) Mathematics calculation (those processes and strategies by which one shows an understanding of the means to reach an arithmetic computation solution);

(7) Mathematics reasoning (the demonstrated ability to employ mathematical facts, concepts, laws and operations to achieve appropriate solutions and applications for mathematics based problems).

Further elaboration on these areas can be found in Appendix D.

Only one area of achievement need be discrepant with the student's ability in order for a diagnosis of learning disabilities to be further considered. But the seven areas described seldom appear in isolation. Lack of basic reading skills is often accompanied by a similar weakness in reading comprehension. The relationship between calculation and reasoning in mathematics is often an equally serious problem for a student who is learning disabled. So while the rules indicate that only one area of achievement need be of concern to the evaluation team, it is wise to consider related areas.

It is not always necessary to formally evaluate all seven areas of achievement. While it is important that the individualized education planning committee has adequate information on all seven areas, it does not necessarily need formal test information on each area. For example, if there is adequate teacher information (e.g., work samples and other performance indicators) that a student is performing well in all aspects of mathematics, it is not essential that mathematics be evaluated formally. But when there is uncertainty regarding achievement in an area, formal testing procedures should be initiated.

Use formal measures for initial evaluations

IV-A Both informal and formal instruments have been suggested since each instrument may be of value when evaluating achievement. It is recommended, however, that technically adequate, formal evaluation instruments be used for the **initial** determination of learning disabilities since they provide norm-referenced scores that permit the type of comparison between ability level and achievement described in the next section on severe discrepancy.

It should be noted that though necessary for determining whether a severe discrepancy exists, such tests may not be the most useful for determining educational interventions. Information regarding achievement level from informal tests and other sources (teacher information, work samples, etc.) would best be viewed as being supplementary and useful for instructional planning.

It should be emphasized that one of the purposes of this component of the evaluation is to obtain information regarding instructional strategies which might be used with the student. In this way, even if the student is determined to be ineligible for special education, pertinent information will be available for subsequent instructional adaptations in the classroom.

Both criterion referenced and norm referenced achievement measures should be considered. If criterion-referenced achievement instruments are used as a part of the determination of learning disabilities, norm references should be available for those instruments so that appropriate interpretive comparisons can be made. It is important to distinguish between the use of test results for determining that a learning disability exists (by determining a severe discrepancy) and their use for selecting specific skills in need of instruction.

A variety of input should be ensured in determining and interpreting achievement level, including parent reports and descriptions, school attendance and pre-referral alternatives which have been tried. The pre-referral process should be emphasized both for determining achievement level and

for instructional alternatives to be tried. Parents' advice should be actively sought in determining the student's achievement level.

IV-B Technically adequate, individually administered tests should be used to evaluate a student's achievement level.

Use adequate measures

The time required to use individually administered tests is offset by the quality of information received from individual testing situations (e.g., being able to directly observe the student's performance during testing, and being able to obtain more valid and reliable test data). Group-administered achievement tests should not be used to determine whether a learning disability exists.

It is also important to consider the nature of the achievement tests used, to insure that the achievement area under evaluation is actually being assessed. For example, if mathematics is being evaluated, it is important to properly determine the amount of reading required in the test, so that poor reading ability does not unduly influence the mathematics performance of the student.

IV-C More than one technically adequate, standardized measure of achievement should be used to determine an area of deficit and severe discrepancy for LD determination.

Use more than one measure in suspected areas

At least two measures should be used to evaluate any of the seven basic achievement areas when deficits in those areas are suspected. Information from informal, criterion-referenced or curriculum-based assessment procedures can also be useful to verify and support information regarding deficient areas.

The determination of deficit areas should involve a multi-disciplinary evaluation team. Two different professionals, in addition to the student's classroom teacher, should make such important decisions. The following priorities should be used:

a. Use the most technically adequate tests

b. Evaluate the content validity of the tests

c. Consider collaborative evidence, including reports from parents and other school personnel

d. If the first three steps do not clarify the matter, consider additional testing, using instruments that are technically adequate and appropriate.

The attainment of different scores from different tests designed to measure the same domain is a common problem, that requires personnel to make judgments regarding the test in which they place the most faith. To assist in this judgment:

- Consider the representativeness and comprehensiveness of norms, the validity and reliability data for the tests, and use the score(s) from the one that is the most technically adequate.

- Consider the administration characteristics, input characteristics, content, and output characteristics of the test to determine how consistent they are with the domain to be assessed and the curriculum of the school district.

- Consider such information as classroom performance, informal test data, grades, group test data, and the like and use the test that most closely corresponds to this information.

The selection of the evaluation measures to be used is a critical factor in the quality of the evaluation, and should be made taking into consideration the appropriateness of the measure to the student's response capabilities and the measure's relationship to the curriculum and to the instructional methodologies which have been used.

Standard scores are the preferred types of scores to use in severe discrepancy analysis with the results described in terms of the relationship between the obtained scores and the student's performance in the classroom. However, other types of scores (e.g., percentile rank scores, age equivalents, grade equivalents) may also be helpful in the identification process and/or in communicating scores to others. Standard scores based on age should be used in these areas.

Consider language skills carefully

IV-D If either listening comprehension or oral expression are suspected as being related to the student's difficulties, a teacher of the speech and language impaired should be assigned as a member of the multi-disciplinary evaluation team. Students in grades Kindergarten through two should be routinely evaluated in the areas of listening skills and oral language if referred to special education because of a suspected learning disability.

IV-E If written expression is determined to be the primary area of difficulty, a language- or conceptual-related disability should be determined: Difficulties with the mechanics of writing or with spelling correctly do not by themselves constitute sufficient evi-

dence that a learning disability exists, unless it is substantiated that they are significantly affecting the student's ability to communicate ideas in writing.

Consider relevance of written language problem

It should be emphasized that one of the purposes of this component of the evaluation is to obtain information regarding instructional strategies which might be used with the student. In this way, even if the student is determined to be ineligible for special education, pertinent information will be available for subsequent instructional adaptations in the classroom.

Both criterion referenced and norm referenced achievement measures should be considered. If criterion-referenced achievement instruments are used as a part of the determination of learning disabilities, norm references should be available for those instruments so that appropriate interpretive comparisons can be made. It is important to distinguish between the use of test results for determining that a learning disability exists (by determining a severe discrepancy) and their use for selecting specific skills in need of instruction.

A variety of input should be ensured in determining and interpreting achievement level, including parent reports and descriptions, school attendance and pre-referral alternatives which have been tried. The pre-referral process should be emphasized both for determining achievement level and for instructional alternatives to be tried. Parents' advice should be actively sought in determining the student's achievement level.

Severe Discrepancy

Severe discrepancy is indicated by a marked difference between a student's predicted achievement (based on cognitive ability) and his or her actual school achievement (in one or more of the seven areas described above) that is statistically significantly different and found infrequently in the general population.

Two statistical factors are of primary importance in determining severe discrepancy: regression toward the mean, and test error.

Regression Toward the Mean. The regression effect means that when a dependent variable (such as academic achievement) is predicted from a correlated measure (such as an Intelligence Quotient, or IQ), the predicted value of the dependent variable will fall closer to the mean on the dependent measure than the obtained measure of ability will suggest. Due to the phenomenon of regression, a measured IQ is technically not a valid index of educational expectancy, unless the student's IQ is 100.

The reason why regression error needs to be corrected is due to the fact that in the general population the average achievement level of persons with below average IQ's is higher than their obtained IQ, and the average achievement levels of persons with above average IQ's is lower than their obtained IQ. This is due to the effect of regression toward the mean. As predictor values (IQ) are above or below the mean, the criterion values (achievement scores) tend to be closer (i.e., regress) to the mean. This is the reason why a direct comparison of standard scores yields an inequitable proportion of individuals with severe discrepancies.

For example, if an individual obtains a Verbal IQ of 112, this score might regress to 107. This indicates that the average person with a Verbal IQ of 112 does not achieve academically at 112, but rather at 107. Thus, the 107 value becomes the student's level of scholastic expectancy, based on his or her obtained IQ score. It is this score that is then compared to his or her achievement level to determine if a severe discrepancy exists. On the other hand, a Performance IQ of 80 regresses to 90, the value that should be used to compare with his or her achievement level. A table is usually used to correct for regression error (see Appendix E).

A procedure which employs regression and standard error of estimate procedures corrects for regression error and uses standard deviation of the difference values to more accurately reflect the statistical nature of the population with respect to the severe discrepancy issue.

Using this procedure permits the identification of the same proportion of persons as having a severe discrepancy regardless of their IQ level. It is a much fairer and more equitable procedure.

Test Error refers to an instrument's reliability in estimating a student's performance level. All scores obtained from tests are merely estimates of one's "true" score. That is, due to test error, there is always some difference between an individual's "true" score and his/her obtained score. Such factors as test length, test-retest interval, and the skill of the examiner will affect the reliability of tests and, consequently, the amount of test error.

The degree of deviation due to error for an obtained score is represented by its "standard error of measurement." The standard error of measurement establishes a zone of confidence within which a true score falls approximately 68% of the time. For example, the average standard error of measurement for the Verbal IQ of the WISC-R is 4 I.Q. points. Therefore, if one obtains a Verbal IQ of 94, there is a 68% chance that the person's "true" score falls within the IQ range of 90-98.

The problem of test error is compounded when one compares data from two different tests. For example, to determine whether a severe discrepancy exists, the typical procedure is to compare the scores obtained from intelligence tests with scores from achievement tests. But when scores from two different tests are compared, the discrepancy score is usually less reliable than the single scores from either test alone (Salvia & Ysseldyke, 1988).

It is important that a severe discrepancy is based on procedures that are as sound as possible. This is true so that a severe discrepancy is determined in a fair and equitable manner, and so that it is defensible, should it be challenged.

V-A The preferred method for determining whether a severe discrepancy between ability and achievement exists is the use of a regression model which compares standard scores between the best predictor of achievement available for the student and at least two independent measures of achievement in the area(s) of disability, taking into account the standard errors. Opinions differ regarding what the minimum discrepancy should be, generally ranging from 15 to 22 points in the regression analysis. Although the ultimate decision regarding how large this discrepancy should be is left to the local education agency to determine, a procedure which takes into account the standard error of estimate is recommended.

A regression model is preferred

More than one person should decide

V-B It is further recommended that the determination of severe discrepancy be a decision made by more than one person in consideration of multiple perspectives. If the use of formal assessment data is not possible, clinical judgement may be considered. However, the MET and the IEPC should clearly and completely document their rationale and the basis for determining a severe discrepancy which cannot be substantiated statistically.

Severe discrepancy is not enough

V-C Determining that a severe discrepancy exists is a necessary, but not a sufficient, condition for determining learning disabilities. It is recognized that this aspect of determining a learning disability is perhaps the least "personal" aspect of evaluation in that a statistical procedure is called for which emphasizes numeric comparisons. The statistical determination of severe discrepancy is but one of many aspects of the identification process. It should be remembered that an array of performance-based data is also available to either corroborate or refute the results of this comparison, and that in the final analysis it is the student's ability to adapt and function in the learning environment which is of paramount concern.

Exclusionary Clause

Not all children who demonstrate a severe discrepancy between ability and achievement in the seven areas need to be identified as learning disabled. A large body of research in child development and cognitive psychology, as well as the analysis of the cumulative effects of early intervention programs such as Head Start, have shown that ability and performance can be significantly disrupted as well as enhanced by a complex array of social factors. It is quite possible that a student's performance and production in the classroom setting are not equal to his or her "ability level" for reasons beyond the student's immediate learning environment. As a safeguard against the inappropriate placement of some learners into programs primarily designed for learning disabled students, P.L. 94-142 has carefully specified a set of exclusionary conditions.

The determination of learning disabilities must be established on the basis of the fact that the disorder underlying the severe discrepancy is related to a "constitutional" factor or group of factors within the individual learner, and is not primarily associated with or caused by other mitigating factors, (e.g., sensory or motor handicaps, mental retardation, emotional disturbance, autism, or environmental, cultural or economic complications that have impacted on school performance). This stipulation is not easily met.

The interplay of a large number of conditions and effects must first be ascertained and judged as effectively as possible by the multi-disciplinary team. What complicates the process is the complex relationship between language, thinking and each learner's immediate culture and environment. At times the task is as difficult (and perhaps as arbitrary) as dividing a pool of water with one's hand; the result is only visible for a moment and then quickly recedes. The history of special education's triumphs and failures in separating mentally-impaired children from behaviorally and learning-impaired children is an excellent example of the issues the exclusionary clause in learning disabilities must confront and resolve.

Additional discussion regarding these issues can be found in Appendix F.

VI-A The exclusionary clause is invoked in a relatively small number of cases of referrals for a suspected learning disability. It is inappropriate to invoke the exclusionary clause when the area of exclusion in not clearly the primary cause of the disability. When it is invoked, the reason(s) should be clearly documented and explained to ensure that all members of the IEP Committee understand the nature of the exclusion.

Consider the primary cause

Exclusions are specified in the rules

VI-B It should be noted that a number of factors are <u>not</u> criteria for exclusion from consideration of a learning disability in and of themselves. These include bilingualism, ADD/ADHD and behavior or conduct disorders.

The decision as to whether or not an individual student should be excluded from special education services due to the nature of his or her severe discrepancy must be approached with care and sensitivity. Lines of differentiation are seldom clear; professional, multi-disciplinary decision-making must be employed at all costs. In every instance, the collection and analysis of all information critical for reaching a sound judgment must be the first priority.

Three-Year Re-Evaluations and Exit Criteria

A student must be re-evaluated at least every three years to determine whether s/he continues to be eligible for special education services.

Learning disabled students should be educated in the least restrictive environment. This means that learning disabled students should receive their education in an age-appropriate regular education environment unless this is determined to be inappropriate by an individualized educational planning committee. In such cases the Michigan Board of Education *Policy Regarding Least Restrictive Environment s*hould be followed to ensure that a continuum of services is available.

The foundation for meaningful exit criteria should be laid at the time of the initial placement. The ultimate goal is to return each student to a regular school program as soon as feasible, and to clearly identify the parameters of each student's potential functioning within regular education. Every effort to phase a student into regular education should be undertaken.

VII-A It is recommended that the criteria used to determine initial eligibility should also be used at the time of the three-year re-evaluation. If these criteria are not met, then the IEPC should determine again whether the student continues to have a need for special education, and should consider increased involvement in the regular education program.

Eligibility must be re-confirmed every three years

Appendices

These appendices are intended to provide elaborative and supportive information to help in the implementation of the guidelines presented on pages 1-23. The contents of these appendices represent a combination of recommendations from the original 1980 institutes, the MALDE 1989 institute which prompted the development of the current guidelines, and suggestions and recommendations of the 1991 institute. The material in these appendices represent additional and supportive information, rather than actual guidelines, and should be used for background information and clarification, and not necessarily as specific recommendations from the institutes.

Appendix A

Pre-Referral Elaborations

Once the child study team (CST) is organized, the following steps should be included in the pre-referral process. It is useful to have a specific time scheduled for CST meetings.

Prior to the team meeting, the child's teacher should specifically document, on a form devised by the operating district, what the presenting academic and/or behavior problem(s) are, what methods and materials have already been tried (including the duration of the trial), and a summary of the student's present level of academic functioning. A review of pertinent data should be conducted with important facts noted on the form. Such data might include: educational history (record of school progress, test scores, attendance, number of school changes), vision and hearing status, speech and language skills, medical history and physical status. The teacher may also bring student work samples.

A comparison between the student's skills and the instructional methods used in the class gives a very useful orientation to the CST and helps it focus attention on relevant alternatives to try. CST members should review information presented by the child's teacher. Based on that information, suggestions should be generated for appropriate learning experiences, which are commensurate with the student's age and ability levels.

The next step is to implement the appropriate suggestions with the support and assistance of the CST.

At the follow-up CST meeting, the results of the attempted suggestions should be evaluated. The information to be documented for use at the MET should include:

1. What was the method or material tried?
2. When was it implemented and terminated?
3. What was the outcome?

Upon review of this information, the CST should decide if further adaptations or modifications are necessary or desired. A determination will otherwise be made as to whether or not a referral to special education will be made.

Clarifying the particular reason for a student's referral for special education services reduces the possibility of a determination being made (or not made) simply because the student is failing in a classroom. More importantly, if the student does not appear to need special educational services, then important data has been collected which can help in planning efforts for the student.

Alternatives

A wide variety of alternatives may be generated within the CST process. Teams are limited in this regard only by their creativity and the alternatives which are brought to the attention of the team. Many resources are available to help teams identify alternatives, and can be accessed through special education learning materials centers (SELMCs), regional educational media centers (REMCs) and commercial publishers. Examples of some of the types of alternatives frequently considered in CST meetings follow.

• Consider alternative grouping and management strategies:

- Change of physical environment (e.g., study carrel, etc.).
- Change in grouping (e.g., 1:1, small group).
- Change in teacher (e.g., team teaching, new classroom).
- Cooperative learning procedures.
- Teacher proximity.
- Cross-age or peer tutoring.
- Allow another student or parent to read text aloud to the student.
- Encourage group tasks with shared responsibilities.
- Model appropriate behavior.

• Consider modifications of instructional materials:

- Adapt a student's text.
- Decrease the reading level required.
- Have student use computer or tape recorder for written assignments.
- Look for the same content in another medium (such as a film or tape).
- Provide other sources of information (such as a tape recorder).
- Provide study guides and practice worksheets.
- Use a greater variety of teaching materials and strategies.

• Consider modifying assignments

- Allow more time for assignments.
- Adjust the conceptual level of the lesson.
- Shorten assignments or break them down into smaller units.
- Make sure student is capable of doing assignments.
- Reduce the time required to finish a task.
- Simulate or demonstrate.
- Use concrete examples.
- Change the pace of the lesson.

• Consider the skills of the student

– Be sure student has ability called for by task.
– Make sure the student knows the expectations of the situation.
– Find ways to increase student's awareness of his behavior.
– Provide rules or structure (or a checklist) for getting organized.
– Reduce distractions.
– Directly teach memory and study skills.

Note: Teachers report that when consideration is given to other students in the class who could also benefit from an adaptation, the time required to make that adaptation is better spent.

Appendix B

Technical Adequacy of Evaluation Instruments

Selection of the most appropriate measures to use in determining whether a learning disability exists is a complex and sophisticated process requiring a sound foundation in testing and measurement, and a broad background in tests which are available for evaluating a variety of both general and specific skills. In this section we review considerations for selecting appropriate measures to use in the evaluation process. A listing of instruments which address the considerations adequately is not provided here, for two reasons:

First, the rate at which tests go into and out of print is quite unpredictable, and citations of specific measures would become outdated too quickly to be of enduring value. While a listing of technically adequate measures and a cross-reference of measures to areas of assessment can be helpful to those involved in the evaluation process, this document is not considered the appropriate place for such a listing. MALDE will publish such lists from time to time in its quarterly newsletter, the Kaleidoscope, as such references become available and known to that newsletter's editors.

Second, an exhaustive listing is not possible, and the resources are not available to approximate such a listing at this time. It was considered important to avoid giving the impression that certain instruments were being recommended while others were being left out of a list, and the path of greatest discretion appeared to be deferring such a list to a more appropriate and dated format. In addition, because a number of participants in our institutes acknowledged that many instruments are used simply because those are the instruments provided by the employing district, it was felt that the greatest benefit could be derived from reiterating some of the considerations which should go into a district's decision to select one measure over another, rather than to risk the implication that tests listed in this document were preferable.

Persons interested in more extensive critiques of and data regarding appropriate measures are referred to the following basic resource materials (or their companion predecessors and successors):

Hammill, D., Brown, L. & Bryant, B. (1989). *A Consumer's Guide to Tests in Print.* Austin, TX: Pro-Ed.

Mitchell, J. V., Jr. (1990). The *Tenth Mental Measurements Yearbook (2 vols.). Lincoln: The Buros Institute of Mental Measurements, University of Nebraska–Lincoln.*

Mitchell, J. V., Jr. (1983). *Tests in Print III.* Lincoln: The Buros Institute of Mental Measurements, University of Nebraska–Lincoln.

Considerations. Among the considerations one should address in selecting measures to be used in the evaluation of students suspected of having learning disabilities are:

1. The technical adequacy of the measure – Does the instrument conform to minimal criteria of reliability and standardization which make it a measure in which we can have confidence? The question of technical adequacy is one which has plagued the field of learning disabilities for years.

A number of factors should be taken into consideration before the technical adequacy of a measure can be determined:

a. Reliability. Several different kinds of reliability should be considered, including

- Test-retest reliability (Will I get a reasonably similar score if I give the test to the same student again?) This is usually expressed as a test characteristic in terms of a correlation coefficient which describes the degree to which the instrument yields similar results on multiple administrations.

- Inter-rater reliability (Will two different examiners obtain reasonably similar results on the same test with the same student?)

- Internal consistency (Do similar items in the same test yield reasonably similar results?).

While agreement is not universal regarding acceptable criteria for "reasonably similar" scores, a reliability coefficient of 0.70 is often thought to be minimal for screening purposes, and 0.90 for individual diagnostic purposes.

b. Standardization. Comparison of scores yielded by different instruments requires that the scores be in a form that can be appropriately compared. Several factors contribute to an instrument's technical adequacy with respect to standardization:

- It should yield standard scores, as they permit direct comparisons with known means and standard deviations across diverse instruments.

- The sample on which the standardization data were based should be of sufficient size and demographic composition to permit appropriate generalizations to the student(s) being evaluated.

- The instrument should provide "normative" data which give the examiner a point of reference for drawing conclusions about the relative performance of an individual.

2. The validity of the measure – Is the instrument actually measuring the student's performance in the domain it purports to? Examination of the construct validity and the concurrent validity of the instrument is important to determine whether confounding factors might influence the interpretability of the results.

3. The prerequisites implicit in the measure – Does the instrument require forms of response or levels of cognitive ability which are within the capabilities of the student to perform?

4. The linguistic and cultural appropriateness of the measure – Is the instrument designed in such a way as to be appropriate for the cultural or linguistic background of the student?

5. The environmental relevance of the measure – Is it measuring knowledges or skills to which the student can reasonably be assumed to have been exposed?

Appendix C

Ability Elaborations

Two different approaches are generally used to determine intellectual ability level in the identification of LD. These two approaches are usually used interchangeably, with little consideration given to the implications of their use (cf Hessler, 1986, 1987). One approach is referred to as an intra-individual variation model. This approach assumes that the criteria for a severe discrepancy is met when an individual has a significant difference between one of the seven achievement areas outlined in the LD definition and a technically sound measure of cognitive ability. In this approach, the actual type of intelligence being measured is not considered; the only important consideration is that there is significant intra-individual variation between cognitive performance and academic achievement. There is therefore no notion of prediction inherent in this approach, although many personnel employ it as if there were. For example, it is often seen that learning disabled students have a severe discrepancy between Performance IQ from the WISC-R and academic achievement. However, Performance IQ has very poor predictive validity for academic achievement, and that is one of the reasons why it is relatively easy to obtain a discrepancy between it and academic achievement.

A discrepancy between Performance IQ and academic achievement indicates that the person has a difference in those two areas, but it does not necessarily indicate that an individual can be expected to be doing better academically. It therefore meets the criteria for a severe discrepancy, but such a discrepancy should not be considered as having educational significance. In this approach, any technically adequate measure of cognitive ability can be legitimately used as a measure of intellectual ability level, since no assumption of predictive validity for academic achievement is inherent in the notion.

The second approach is referred to as a predictive model. In this approach use of a measure of intellectual ability is limited to those technically adequate tests of cognitive ability that have relatively strong predictive validity for academic achievement. In contrast to the intra-individual variation model, the predictive model has a predictive component. That is, since the tests of intelligence employed have predictive validity (such as Verbal IQ from the WISC-R, Verbal Processing from the K-ABC, or the Aptitude Clusters from the Woodcock-Johnson or the Woodcock-Johnson— Revised), the level of ability can be considered to be an estimate of a person's level of expectancy for reading, written expression, and mathematics. There is therefore more educational validity in this approach than the first.

In essence, the criteria for selecting a test of intelligence as a test for use in the predictive model is that the test is a good measure of "g" (abstraction and mental complexity), that it measures a variety of cognitive abilities, and that it has strong predictive validity for academic achievement, but that is not confounded by academic achievement (i.e., does not directly measure the academic achievement it is designed to predict).

The tests and procedures outlined below are presented to provide a repertoire of alternatives that

diagnostic personnel can use to assist with the determination of ability level. The list is not exhaustive, and personnel may wish to add and supplement the lists depending upon their needs. For reference purposes, the procedures are grouped in the following seven categories:

(l) General Intelligence Tests
(2) Intra-Test Analysis
(3) Achievement Tests
(4) Specialized Abilities
(5) Adaptive Behavior Scales
(6) Psychological Extras
(7) Observation Techniques

1. General Intelligence Tests

Individually administered intelligence tests sample different aspects of mental abilities which are valuable in many types of learning and adaptive situations. They typically sample various aspects of verbal and/or nonverbal mental functioning. Although it is unlikely that a test discretely measures just verbal or nonverbal cognitive performance, it is convenient, and often beneficial, to consider them as measuring primarily one of those two cognitive abilities.

2. Intra-Test Analysis

Since many learning disabled students display major discrepancies and variations in their cognitive performance, it is frequently beneficial to analyze a student's performance on an individually administered intelligence test. By carefully analyzing and grouping subtest scores, one often obtains a clearer indication of a learning disabled student's cognitive strengths and weaknesses, and hence a more valid appraisal of his/her ability level. Some of the more frequently used analysis procedures are discussed in this section.

Kaufman's Procedures. As a result of a factor analytic study of data drawn from the standardization sample of the WISC-R, Kaufman (1979) identified three major factors (verbal comprehension, perceptual organization and freedom from distractibility) assessed in the WISC-R. The factors and their related subtests are shown in Table 1.

Table 1. Kaufman's Regrouping of WISC-R Subtests

Verbal Comprehension	Perceptual Organization	Freedom from Distractibility
Information	Picture Completion	Arithmetic
Similarities	Picture Arrangement	Digit Span
Vocabulary	Block Design	Coding
Comprehension	Object Assembly	
	Mazes	

In some cases, particularly with learning disabled students, this categorization may characterize the cognitive abilities of students in a more valid manner than the typical Verbal IQ-Performance IQ dichotomy. Sobotka and Black (1978) describe a procedure for rapidly converting the summed factor scores into standard IQ scores. This permits the direct comparison of the factors to each other and to the Verbal, Performance, and Full Scale IQ scores.

The Verbal Comprehension factor would appear to measure one's ability to comprehend, conceptualize, and express verbal information, as well as to verbally retain knowledge (exclusive of arithmetic skills). The **Perceptual Organization** factor would appear to predominantly measure one's ability to conceptualize and abstract nonverbal information. Thus, these two factors would appear to provide a fairly good representation of one's verbal and nonverbal cognitive performance.

In contrast to the two cognitive factors, the **Freedom from Distractibility** cluster would appear to primarily be a measure of behavioral attributes. Therefore, it is often felt to measure one's ability to selectively attend and concentrate on tasks. It may also be a measure of test anxiety. However, while it is quite easy to see how a student may score very poorly on the three subtests constituting this factor because of distractible behavior or test anxiety, it is more difficult to conceive of students performing very well on the three subtests merely by attending in a selective manner. The factor likely also measures some cognitive abilities (such as numerical skills, sequencing skills, memory skills, auditory reorganization abilities, fine motor skills, rapid learning propensities, and the like), that must be considered during the interpretation process.

Kaufman's book also provides invaluable data for interpreting the significance of subtest scatter and verbal-performance IQ discrepancies. He also outlines a process for thoughtfully analyzing the scores obtained from the WISC-R. Essentially, the procedures provide a step-by-step process in which a better understanding of an individual's intellectual processes can be made when his/her scores do not resemble the Verbal and Performance Scales of the WISC-R.

Bannatyne's Categorizations. Bannatyne (1971) suggested a re-categorization of the subtests from the WISC which is also applicable for use with the WISC-R. It is a slight variant to Kaufman's factor structure which often provides additional information regarding a youngster's cognitive performance. Bannatyne recommends the division of the subtests into the categories shown in Table 2.

Table 2 Bannatyne's Re-categorizations of WISC-R Subtests

Verbal Conceptualization Ability	**Spatial Ability**	**Sequencing Ability**	**Acquired Knowledge**
Comprehension	Picture Completion	Arithmetic	Information
Similarities	Block Design	Digit Span	Arithmetic
Vocabulary	Object Assembly	Coding	Vocabulary

He defines the categories as follows:

1. Verbal conceptualizing ability: ability to manipulate and develop concepts; strong reliance on language cognitive skills.

2. Spatial ability: ability to manipulate objects directly or symbolically in multi-dimensional space, without sequencing.

3. Sequencing ability: ability to retain sequences of auditory and visual stimuli in short term memory storage; attentional processes are also involved.

4. Acquired knowledge: estimate of educational attainment.

Sattler's Analysis. Sattler (1974, pp. 134-146) presented a classification scheme of the 1960 Stanford Binet Intelligence Scale which "... is offered as a means of ordering data from the Stanford-Binet and as a convenient way of describing what the child has done in categories that have some validity" (p. 134). The scheme was not to be used to determine special abilities, but rather was intended to assist in making interpretations; apparent strengths and weaknesses need to be substantiated by further testing. Sattler's seven categories include:

1. Language. This category includes tests related to maturity of vocabulary (in relation to the pre-kindergarten level), extent of vocabulary (referring to the number of words the child can define), quality of vocabulary (measured by such tests as abstract words, rhymes, word naming, and definitions), and comprehension of verbal relations.

2. Memory. This category contains meaningful, non-meaningful, and visual memory tests. The tests are considered to reflect rote auditory memory, ideational memory, and attention span.

3. Conceptual Thinking. This category, while closely associated with language ability, is primarily concerned with abstract thinking. Such functions as generalization, assuming an "as if" attitude, conceptual thinking, and utilizing a categorical attitude are subsumed.

4. Reasoning. This category contains verbal and nonverbal reasoning tests. The verbal absurdity tests are the prototype for the verbal reasoning tests. The pictorial and orientation problems represent a model for the nonverbal reasoning tests. Reasoning includes the perception of logical relations, discrimination ability, and analysis and synthesis. Spatial reasoning may also be measured by the orientation tests.

5. Numerical Reasoning. This category includes tests involving arithmetic reasoning problems. The content is closely related to school learning. Numerical reasoning involves concentration and the ability to generalize from numerical data.

6. Visual-Motor. This category contains tests concerned with manual dexterity, eye-hand coordination, and perception of spatial relations. Constructive visual imagery may be involved in the paper folding test, as may nonverbal reasoning ability in some of the visual-motor tests,

7. Social Intelligence. This category strongly overlaps with the reasoning category, so that consideration should be given to the tests classified in the latter as also reflecting social comprehension. Social intelligence includes social maturity and social judgment. The comprehension and finding reasons tests are seen to reflect social judgment, whereas obeying simple commands, response to pictures, and comparison tests likely reflect social maturity. (p. 135)

In his work, Sattler identified the subtests from the Stanford-Binet which were associated with each category. He also presented a "Binetgram" which provides a graphic, visual picture of an individual's strengths and weaknesses on the Stanford-Binet. In addition, Sattler described his "standard deviation method" which is used to facilitate analysis of one's performance on the scale. The procedure permits one to use chronological age and/or mental age as a reference point for analyzing a student's pattern of performance.

Valett's Procedure. Valett (1965) also presented a procedure for the Stanford-Binet. While generally similar to Sattler's conceptualization, it employs different categorical titles and definitions. The user is provided a profile sheet to visually display a student's strengths and weaknesses in the six categories:

1. General Comprehension The ability to conceptualize and integrate components into a meaningful total relationship.

2. Visual Motor Ability The ability to manipulate materials in problem solving situations usually requiring integration of visual and motor skills.

3. Arithmetic Reasoning The ability to make appropriate numerical associations and deal with mental abstractions in problem solving situations.

4. Memory and Concentration The ability to attend and retain. Requires motivation and attention and usually measures degree of retention of various test items.

5. Vocabulary and Verbal Fluency The ability to use words correctly in association with concrete or abstract material; the understanding of words and verbal concepts; the quality and quantity of verbal expression.

6. Judgment and Reasoning The ability to comprehend and respond appropriately in specific situations requiring discrimination, comparison, and judgment in adaptation.

Guilford's Structure of Intellect Model. Guilford (1967) developed a three-dimensional theoretical model of intelligence that lends itself well for organizing the constructs measured by various cognitive tests. The dimensions of his model are listed below with a definition of each dimension (Kaufman, 1979, pp. 71-72):

1. Operations – intellectual processes.

   a. Cognition (C): Immediate awareness, recognition, or comprehension of stimuli.
   b. Memory (M): Retention of information in the same form in which it was stored.
   c. Evaluation (E): Making judgments about information in terms of a known standard.
   d. Convergent Production (N): Responding to stimuli with the unique or "best" answer.
   e. Divergent production (D): Responding to stimuli where the emphasis is on variety or quality of response (associated with creativity).

2. Contents – nature of the stimuli.

   a. Figural (F): Shapes or concrete objects.
   b. Symbolic (S): Numerals, single letters, or any coded symbol.
   c. Semantic (M): Words and ideas that convey meaning.
   d. Behavioral (B): Primarily nonverbal, involving human interactions with a stress on attitudes, needs, thoughts, and so on.

3. Products – the way the stimuli are organized.

A hierarchy extends from Units (U), where the stimuli are perceived singly, to the increasingly more complex Classes (C), Relations (R), Systems (S), Transformations (T), and Implications (I).

3. Achievement Tests

Although achievement tests have been traditionally thought of by some as being separate from ability tests and/or aptitude or intelligence tests (Cronbach, 1960), there is some evidence to suggest the contrary. Sattler (1974) lists studies that have compared some intelligence tests with achievement tests showing many high correlations. It is believed that by analyzing information from individually administered achievement tests, one can often gain some insight into an individual's ability level. It is common among learning disabled students, for example, that they score within the average range in mathematics, while scoring significantly below age and grade expectancies in reading and written language (e.g., spelling). This would suggest that a student under consideration may have at least average ability, since it is theoretically not possible to score above one's innate potential. This would, of course, need to be substantiated by other information because it is possible that the youngster's ability level may indeed be above his level of measured math skills.

It is also beneficial to consider the information received from achievement tests which provide measures of general information and knowledge (e.g., Peabody Individual Achievement Test – Revised, Tests of Achievement from the Woodcock-Johnson Psycho-Educational Battery – Revised). Learning disabled students frequently perform significantly above their academic achievement levels on measures of general knowledge and information. Presumably, this is due to their relatively good cognitive abilities which permit them to learn incidentally good amounts of general information and knowledge, which is in direct contrast to their learning in more formal achievement areas.

4. Specialized Abilities

Information received from tests which measure more specialized abilities are often of value for determining ability level. Measures of specialized abilities assess only a limited range of tasks (e.g., specific aspects of language, mechanical comprehension, sense of pitch, finger dexterity, etc.). Perceptual-motor accuracy and speed (as opposed to higher level cognitive abilities) is often emphasized in many of the tests of mechanical ability, a fact which should be considered when determining one's cognitive ability level. On the other hand, other measures primarily evaluate cognitive functions. Typically, tests of specialized abilities use profiles which permit the analysis of both inter- and intra-individual performance.

5. Adaptive Behavior Scales

The definition of ability level used in this report considers both a person's cognitive and adaptive performances. This is consistent with the American Association of Mental Deficiency definition and the P.L. 94-142 law defining mental retardation. As a result, adaptive behavior is considered important in clarifying a person's ability level and/or intelligence.

Adaptive behavior scales reportedly measure the effectiveness or degree to which an individual meets societal expectations of personal independence and responsibility. Thus, adaptive behavior scales can measure such attributes as self-help skills, communication skills, personal self-direction and motivation, social skills, personal initiative and independence, peer and community relations, personal responsibility, vocational activities, physical development, nonacademic school roles, and the like. Generally, use of these scales with infants and preschool children involves the primary assessment of maturation and development. The evaluation of school-aged children, adolescents, and adult on the other hand, is more related to assessing societal customs and expectations (Salvia & Ysseldyke, 1978).

Adaptive behavior scales provide an additional perspective from which to view one's ability level, since they present an indication of the effective use one is making of his/her ability level. Care must be taken to assure the technical adequacy of any scale to be used.

Obtaining and analyzing a record of an individual's general development, social, and educational growth will often provide further information about one's cognitive growth and maturation. Such information provides insight from a slightly different perspective than the previously discussed areas.

6. Psychological Extras

The use of "psychological extras" is an effort to search for additional information about an individual student's learning and cognitive abilities beyond that received from standardized ability measures or test scores (Kratochwill, 1977). "Their merit appears to be in deliberate attempts to focus on information acquisition processes and strategies that provide leads as to how a child could be assisted in classrooms and, if necessary, during remedial sessions. With their emphasis on what works for this

child they do offer information beyond many conventional testing practices." (p. 307).

Some examples of informal assessment strategies are briefly described below. If more specific information regarding these strategies is desired, one may refer to Kratochwill (1977) and the other primary references cited there.

- Learning Potential Assessment. This strategy uses a test-train-retest assessment paradigm to determine the amount of learning necessary to facilitate acquisition of new skills.

- Paired-Associate Learning. Paired learning tasks (e.g., noun pairs, picture pairs, number pairs, etc.) are provided to determine the length of time necessary for such learning. This procedure is based on the premise that learning new information reflects a direct measure of learning ability; rather than measuring past learning, as is the case with many tests.

- Diagnostic Teaching. A student is taught selected materials in a rather controlled fashion (i.e., visual vs. auditory, structured vs. unstructured, concrete vs. conceptual, etc.) to determine the qualitative manner in which the student learns best. This technique may provide information regarding an individual's level of ability with respect to specific teaching techniques.

7. Observation Techniques

Observing a student in the classroom, or in more unstructured situations such as on the playground or in the gym, often provides invaluable indications of one's ability level. Such observations provide insight with respect to the level of the youngster's cognitive abilities and, perhaps more importantly, how he or she uses them in everyday, practical situations.

When observing a student, it is often beneficial to use time-sampling or behavior-frequency counting methods and use the student's peers as controls since norm-referenced instruments are not readily available in this assessment area.

An observation sequence may be of most value for determining ability when it includes the following dimensions:

- Attention Skills – One might consider task orientation variables (i.e., to what is the student attending) and possible causes of inattention, if present.

- Verbal Abilities – Note should be made of the youngster's receptive (i.e., listening comprehension) and expressive abilities.

- Problem-Solving Strategies – Try to determine the student's approach to tasks, speed of decision making and responses, persistence with (especially somewhat difficult) tasks, task completion, motivation, and the like.

- Social Behavior – Observe the youngster's behavior and social strategies with both peers and adults in structured and unstructured situations.

- Classroom Variables – Observe the climate of the classroom and whether the teacher is sensitive to the individual needs of students. Also, note the various strategies and adjustments the teacher has tried with the student and their effects.

A variety of formal and informal procedures may be employed to obtain an indication of a student's cognitive and adaptive performance. These include: adaptive behavior scales; achievement tests; observation techniques; "psychological extras" (e.g., diagnostic testing-teaching strategies); tests of specialized abilities; developmental, social, and educational histories; intelligence tests; social competence; intra-test analyses; and the like. It is not necessary to use all of the procedures indicated above. In fact, this would be done only infrequently. For example, if a student being evaluated were to receive "average range" rating on his or her individually administered intelligence test, and other formal or informal data corroborated this ability level, there may be no need to utilize further procedures. However, in a circumstance where there is a question concerning a student's deviance from "average" (particularly below average) more data will likely be required by way of additional procedures to clarify and support a particular ability level. Again, the goal is to acquire a reasonable indication of one's cognitive and adaptive competencies; the point to which this has been accomplished is decided by the multidisciplinary evaluation team and/or the IEP committee.

The determination of ability level requires that the educational planning committee review all the information regarding the individual's cognitive functioning, and then arrive at a decision of ability level.

Guidelines for Evaluating Students with Limited English

School psychologists from Oakland County have prepared a guidelines document for psychological evaluation of students with limited-English proficiency. The information is intended to be of assistance to psychologists and others involved in evaluations of such students.

Called *Guidelines for the Comprehensive Psychological Evaluation for Limited-English Proficient Students in Oakland County*, this document contains reviews of literature, discusses models of evaluation, and presents recommendations. The document was edited by Richard Brazovich, Marie Oplesch, and Giannina Villegas.

Appendix D

Achievement Elaborations

This section will discuss each of the seven areas of achievement. For each topic, a definition will be posed and then discussed.

The rules require that the IEPC team identify how each area was assessed. Whether the areas are informally or formally evaluated, a report should be included to provide a basis for the team's final decisions.

Oral Expression

Definition. Oral expression is the ability to express oneself utilizing vocal speech and language. This includes:

A. Phonology – producing the phonemes (speech sounds) of a language according to the rules which dictate their combination.

B. Morphology – producing the morphemes (smallest meaningful spoken units having a differential function) of a language according to the rules which dictate their combination.

C. Syntax – employing the rules which dictate the sequence, combination, and function of words in an acceptable spoken sentence.

D. Semantics – producing spoken utterances which are relevant and meaningful in a given communication context.

E. Pragmatics – using language (including inflection and gestures) in a manner which is consistent with the speaker's intent (e.g., to inform, express, request, describe, persuade, etc.) and meaningful in a given communication context.

Discussion. Oral expression is the ability to express oneself verbally and includes utilization of the phonological, morphological, syntactical, semantic and pragmatic aspects of one's own language system. While these five components are listed separately for purposes of explanation, it is important to understand that all five components typically interact in an ongoing, simultaneous manner when normal oral expression is taking place. A separate analysis of the components merely permits a more precise examination and definition of the function "oral expression." Any valid assessment of oral expression should involve utilizable oral expression abilities when the five components are being used concurrently in context.

While many combinations of oral expression problems may occur, the primary characteristic of students exhibiting an expression deficit is their inability to formulate age-appropriate spoken

language. In any case, it is highly recommended that an assessment team evaluating a child suspected of having a specific disability in the area of oral expression consult a speech and language therapist for assisting in the diagnosis.

Two additional concerns need to be considered when evaluating the oral expression (as well as the listening comprehension) of a student in school: (l) primary language and dysfunctions in Standard American English; and (2) relationships between language and thinking.

Since language is at least in part environmentally determined, the first concern is related to the issue of language disability in homes where a second language is spoken either exclusively or in addition to Standard American English. This issue is significant because it is clearly inappropriate and detrimental to diagnose a student as having a language dysfunction, unless the student is dysfunctional in his/her primary language or dialect (Salvia & Ysseldyke, 1978). Therefore, to the degree possible, it is essential that students from bilingual homes are evaluated in their primary language, as well as in Standard American English.

It is also important to consider that students who do not have a language dysfunction in their primary language, may have a deficit in Standard American English that can restrict their academic progress. Thus, Standard American English may need to be evaluated and taught, if deficient, not because it is superior, but rather because it provides individuals greater access to our educational and social system (Salvia & Ysseldyke, 1978).

The second issue concerns the confusion of the correspondence between language and intellectual competence (Salvia & Ysseldyke, 1978). There is little agreement among psychologists and linguists about where linguistic competence ends and intellectual competence begins. Therefore, when assessing oral expression and listening comprehension, careful consideration needs to be given to the assumed amount of intellectual competence being assessed and its relationship to verbal competence.

Listening Comprehension

Definition. Listening comprehension is the ability to receive and to understand spoken utterances. Listening comprehension includes:

A. Phonology – auditorily discriminating the phonemes (speech sounds) of a language according to the rules which dictate their combination.

B. Morphology – understanding the morphemes (smallest meaningful spoken units having a differential function) of a language when these are produced by a speaker according to the rules which dictate their combination.

C. Syntax – understanding the sentences of a speaker when these are produced according to an acceptable sequence, combination and function of words.

D. Semantics – understanding any spoken utterance of a talker which is relevant and meaningful to a given communication context.

E. Pragmatics – understanding language (including inflection and gestures) so as to be able to discern the speaker's intent (e.g., to inform, express, request, describe, persuade, etc.) in a given communication context.

Discussion. Listening comprehension has been further defined as the ability to comprehend heard verbal information which includes utilization of the phonological, morphological, syntactical, semantic and pragmatic aspects of one's own language system.

The user of this report may wish to refer again to the discussion portion of the "Oral Expression" section above for an elaboration of some of the major issues and considerations related to the evaluation of listening comprehension. Some issues discussed there apply to listening comprehension as well.

The primary characteristic of students exhibiting a listening comprehension deficit is their inability to comprehend the spoken word. The inability to understand words, however, must be differentiated from disorders related to distractibility or auditory memory.

As in assessing oral expression, a separate analysis of the components listed above merely permits a more precise examination and definition of the function of listening comprehension and a valid assessment of listening comprehension should involve the subject's overall utilizable listening comprehension abilities when the five components are being used concurrently in context.

Basic Reading Skills

Both Basic Reading Skills and its adjoining area, Reading Comprehension, need to be considered as complementary dimensions of achievement. The apparent separation of each here is for diagnostic and explanatory purposes and should not be construed as realistic.

Definition. Basic reading skill is defined as those fundamental reading skills, processes, and strategies required for identifying clues significant for meaning in written text and for attaining comprehension skills. This area includes such items as:

A. Sight word vocabulary – identifying words by sight from their configuration and form, and, when in context, from their semantic and syntactic relationships.

B. Phonic Analysis – identifying words by utilizing sound-symbol relationships and structural analysis.

C. Reading rate – reading speed and fluency that reflects the efficient processing of meaning.

D. Text Analysis – identifying and responding to the clues inherent in the shape, flow and direction of written discourse

E. Proficiency – combining all elements of basic reading skills and strategies so as to gain the maximum momentum for reading.

Discussion. Basic reading skills are viewed as skills, processes, and strategies fundamental for both leading the reader to meaning and for confirming meaning in the text. Since reading proficiency is rooted in the pursuit of meaning by the reader, it is important to consider the accuracy of basic reading skills primarily in a context meaningful to the reader, and only secondly in isolation. Thus, while it is perhaps of value to assess such skills as sight vocabulary and phonics abilities in isolation, it is most critical to evaluate them in a textual context meaningful to the student. By evaluating them in a context meaningful to the reader, one obtains an indication of the degree to which the student is able to use the basic skills in the total reading act. This is important since, for example, some poor readers have fairly good facility identifying phonics rules in isolation, but demonstrate much difficulty applying them in context. The inverse situation in which the student can employ the rules in context, but not in isolation, is also relatively common with learning disabled students. A similar situation in which students read words by sight in context better than in isolation has also been observed. The recommended assessment of individual basic reading skills should not be interpreted to mean that a student's basic reading skills alone can determine a learning disability. A composite profile of the student's basic reading skills and strategies is needed for the determination of his or her achievement level.

It is important to also consider that there is not always a direct correspondence between basic reading skills and reading comprehension. Frequently, learning disabled students will perform basic reading skill tasks very poorly, while their reading comprehension remains relatively well-developed. In other cases, however, the reverse situation is also observed. As a result, it is important not to predict one type of reading ability from performance on the other, since they would appear to be semi-independent. Regardless of their "connectedness," both areas need to be evaluated.

Reading Comprehension

Definition. Whether considered in oral or silent-reading contexts, reading comprehension is defined as the process of constructing meaning through the dynamic interaction among the reader's existing knowledge, the information suggested by the written language and the context of the reading situation.

Reading comprehension consists of two levels of performance:

A. Literal – understanding information which appears directly in the written material, e.g., summarizing ideas, answering questions based directly on the content of a written passage, sequencing details and ideas.

B. Inferential – interpreting and generalizing from what has been read; the reader demonstrates the ability to expand upon and generalize from the written material, e.g., noting cause-effect relationships, drawing conclusions, judging accuracy, distinguishing between fact and opinion, making predictions.

Discussion. A reader appears to comprehend written text when he or she can understand, confirm, disprove, summarize and/or infer from the ideas presented by the author. Reading comprehension is an equally important dimension to the profile of a proficient reader suggested by the earlier examination of Basic Reading Skills.

It is important to keep a number of factors in mind when considering how well a particular student comprehends written text. Research has shown that readers comprehend best when these elements are present both in the text and the reading act:

1. degree of compatibility and "match" between the language and vocabulary of the students and that of the author and text;

2. relative clarity and "density" of the concepts being developed in the text by the author;

3. relative predictability ("redundancy") of the syntactic structures and concepts of the text;

4. the specific expectations of the student reader upon first interacting with the text, i.e., to learn, confirm, disprove, summarize, retell or infer from the ideas presented; and

5. the range of options or reading strategies held by the reader which can be flexibly employed depending upon his/her intent and needs.

Written Expression

Of the seven achievement areas now identified as being keys to isolating a severe discrepancy in school-age children, written expression is the least well-defined: federal and state definitions have remained vague; evaluation procedures which reflect a particular student's language and experience are lacking; and strategies and instruments to measure written expression beyond simple "editing skills" are still being refined. The following ideas and procedures are suggested to examine a student's performance in written expression.

Definition. Written Expression is the ability to use one's own graphic symbol system to clearly communicate ideas, thoughts and feelings in a meaningful way.

In order to write meaningfully, a person must be competent in at least five basic writing areas:

A. Mechanical – to form letters, words, numerals, and sentences in a legible manner;

B. Productive – to generate enough meaningful sentences to express one's thoughts, feelings, and opinions adequately;

C. Conventional – to write in compliance with accepted standards of style, especially those governing punctuation, capitalization, format, and spelling;

D. Linguistic – to use acceptable English syntactic, morphological, and semantic elements; and

E. Cognitive – to express ideas, opinions, and thoughts in a creative and organized way, including writing at an expected level of abstraction.

Discussion. Writing to express one's ideas, concepts and feelings meaningfully is the result of a carefully articulated developmental process. In the past 20 years, researchers like Donald Graves, Janet Emig and James Britton have painstakingly studied how writing appears and grows in children. The results of their work are critical for any diagnostician charged with the task of formally evaluating the written expression of students suspected of being learning disabled. Britton (1970) and Graves' (1978, 1980) work in particular underscore how unreliable a picture one gets of a child's written expression if only standardized achievement instrument subtests are used to evaluate it. Far more is happening in the child's use of language and thinking when he or she puts a pencil to paper than such tests have reflected.

Effective, meaningful writing at any age requires the interaction of each of the five component skills mentioned above. However, it is quite natural for poor performance in several of the areas to be demonstrated by young, developing authors. Some diagnosticians have argued that poor performance in any one component area (such as in handwriting or spelling) would not usually suggest a problem in written expression, unless it could be demonstrated that this single low ability is significantly interfering with the student's ability to express himself in writing. Current research has cast doubt on whether even that condition can be accurately judged. Younger children, for example, invent their own conventions for syntax and spelling; while these appear quite different from adult discourse, they are necessary preconditions to developing more conventional writing forms.

It is essential to keep the developmental nature of writing in mind while examining the products of written expression. The influence of each of the five components changes with learning and maturation. The mechanical and conventional components seem to be of primary instructional focus during the early elementary grades, while the remaining components receive increased attention as the student progresses in school. Similarly, the student's perception of how much another reader brings to the written product shifts from childhood to adolescence. These concerns are seldom addressed by standardized assessments; teachers and diagnostic personnel need to refer to other models (such as portfolio assessments) to develop an accurate profile of a student writer's abilities.

Based on evaluation measures used in this area, additional benefits may well be derived for making recommendations which have instructional relevance to recent approaches to teaching the writing process. Implications for instruction would be helpful to consider in instructional areas related to pre-writing activities, composing, proofreading, editing and publishing.

Mathematics Calculation

Mathematics calculation and mathematical reasoning have been artificially separated in the definition of learning disabilities being examined here. It is not really possible to separate the calculation

aspects from the reasoning aspects of mathematics without adopting a rather limited notion of what mathematics is all about. Mathematics is far more than the stilted memorization of basic "facts" in isolation. Any examination of mathematics must begin with the assumption that it is a dynamic learning area where discovery, manipulation and understanding are necessary features.

As Biggs and MacLean have argued, three powerful aims are the foundation of mathematics learning: (1) to free students, however young or old, to think for themselves; (2) to provide opportunities for them to discover the order, pattern, and relations which are the very essence of mathematics, not only in the man made world, but in the natural world as well; and (3) to train students in the necessary skills.

Children seem to go through three distinct phases in their mathematical development: the exploration stage, the awareness stage, and the refining and mastering stage. They need time to discover, to explore, to play with physical equipment on their own. If given sufficient time to experiment and to verify their experiments by repetition at this concrete stage, the "awareness" of pattern and structure becomes intuitively a part of them: in some more than others, of course, but a very necessary skill to develop, no matter to what degree. The "refining and mastery" stage marks the transformation from the concrete and intuitive phases to the abstract form of mathematics: precise language, both written and spoken, writing and solving equations with an understanding and active use of the properties of mathematics, understanding the properties of geometric figures, spatial perceptions, and symmetries. (NAIS, 1976)

Definition. Mathematics calculation includes those processes and strategies by which one shows an understanding of the means to reach an arithmetic computation solution. Broadly stated, such strategies include the concrete or rote manipulation of objects, sets, numbers and patterns in order to reach an appropriate solution.

Discussion. Calculation abilities in mathematics include not only the computational processes of addition, subtraction, multiplication and division, but also the wider conceptual base of "averaging," "differences," "greater/lesser," and related operations. It includes the identification and understanding of a unique symbol system: +, -, x, /, %, >, <, etc. More importantly, it assumes full knowledge of the base 10 system, and the fact that problems can be resolved by one, two or many intermediate steps. The calculations may require such operations as counting or computation, and may involve a variety of content, including whole numbers, fractions, decimals, percents, and the like.

Typically, calculation skills are demonstrated through the use of a pencil and paper format in which tangible assistance (e.g., use of fingers, marks on paper, etc.) can be utilized by the student. Thus, mental abstractions are minimized. In addition, mathematics calculation tasks require only the determination of the correct answer to the computational tasks; no applications or generalizations are required as is the case with mathematics reasoning tasks.

Note: Many students are taught to use calculators to solve computation tasks. It is important to not allow the use of such compensatory aids in the formal evaluation setting.

Mathematics Reasoning

This final area of achievement is intimately related to calculation and is both numerical and non-numerical.

Definition. Mathematics reasoning is the demonstrated ability to employ mathematical facts, concepts, laws and operations to achieve appropriate solutions to mathematics-rooted problems.

Mathematics reasoning includes several levels of awareness:

A. A sense of order and pattern: being freed from the more magical interpretations of the non-mathematical world.

B. An understanding of the nature of the problem: being aware of how particular problems require an identification of the basic question posed and the inferred solution.

C. Ability to predict or fashion good solution strategies: being aware of the feasibility of some strategies for problem-solving and the poor prospects of others for each problem.

D. Persistence and re-investigating a solution – a sense of knowing how or when a particular strategy is moving away from the possible solution and thus pursuing a different approach.

E. Ability to employ the most efficient strategy: being aware of the most economical way to reach the solution for a problem.

Discussion. It is important that both types of mathematics performance be evaluated, since it is not always possible to predict performance in mathematics calculation from one's performance in mathematics reasoning, and vice versa. More importantly, some students show poor performance in mathematics calculation but do quite well in tasks involving concepts and reasoning strategies.

When performing mathematics reasoning tasks, the student must typically consider mathematical facts and concepts, calculate the solution, and finally apply the solution in an accurate, appropriate manner. The student must therefore isolate the important information needed to solve the task, usually through making inferences or applications to the real world. Often, mathematical reasoning can be evidenced best by a student's ability to apply strategies and concepts to a variety of tasks and problems.

While the student may at times use paper and pencil to arrive at the solution, mental abstraction and generalization is emphasized in the performance of mathematics reasoning tasks. Essentially, higher level abstractions are required, rather than merely concrete mathematical calculation (where only the solution is required). Mathematics reasoning often includes problems which require the use of such processes as mental problem solving, measurement, reading graphs and tables, money and budgeting and related problems.

Appendix E

Severe Discrepancy Elaborations

The issue of severe discrepancy continues to be one of the most problematic and controversial aspects of the LD definition. Since the determination of severe discrepancy is at least in part arbitrary, it should be no surprise that there is great variability in terms of how it is conceptualized and operationalized. However, it is important that a severe discrepancy is based on procedures that are as sound as possible. This is true so that a severe discrepancy is determined in a fair and equitable manner, and so that it is defensible, should it be challenged.

Historically, there have been four main ways in which severe discrepancy has been conceptualized and operationalized. The first is a grade-based procedure. Severe discrepancy in this model is simply determined by whether or not an individual is two or more years behind his or her grade placement. Thus, in this model, no consideration is given to one's intellectual ability since grade level is used as the level of expectancy; everyone is essentially assumed to have average ability.

This model is not consistent with the mandatory special education rules and regulations in that academic achievement is not compared to intellectual ability level, but rather to present grade level. This procedure will result in a disproportionately large number of students with low intellectual ability, and a disproportionately small number of students with high intellectual ability as having a severe discrepancy. Furthermore, a large proportion of persons will tend to have a severe discrepancy in the higher grades. Finally, while it has the advantage of being simple, this model makes it difficult to determine the proportion of the population that will have a severe discrepancy.

The second procedure uses a numerical formula, such as ((CA x IQ) / 100) -5 = AE, where CA is chronological age, IQ is the obtained IQ score, and AE is the Academic Expectancy. Usually, academic performance at or less than 50 percent of the AE is used to determine a severe discrepancy. This procedure has a number of shortcomings. First, the formula is technically unsound since it uses terms in a mathematically inappropriate way. For example, it compares developmental scores (age and grade scores) with standard scores (IQ). In addition, the formula identifies a larger proportion of individuals as having a severe discrepancy as they progress in the grades, and it also makes it difficult to determine the proportion of the population that will have a severe discrepancy.

The third procedure for determining a severe discrepancy is probably the most popular. This is the standard score comparison model, and involves the direct comparison of obtained IQ scores with academic achievement scores (which have been converted to standard scores). This procedure involves the direct comparison of IQ with achievement through use of a common metric (i.e., standard scores), and therefore has the advantage of simplicity. In this procedure, a severe discrepancy is based on a set criteria based on standard score units, usually 15 points. However, the procedure also has some shortcomings, which are indicated in Table 1.

For example, the first column in Table 1 indicates the obtained IQ scores from 70 to 130. The second column represents the level of academic achievement that must be present for a 15 point discrepancy to exist. The next three columns are headed by the approximate correlations between various tests

of intelligence and academic achievement. For example, there is an approximate .7 correlation between the Aptitude Clusters from the Woodcock-Johnson or Woodcock-Johnson—Revised and academic achievement, an approximate .6 correlation between Verbal IQ from WISC-R and academic achievement, and an approximate .5 correlation between Performance IQ and academic achievement. The values under each of these columns indicate the approximate percentage of the population that would meet a 15 point discrepancy.

If, for example, we found all the persons in a particular area with a Performance IQ of 130, and then administered that group of persons a test of academic achievement, approximately 50 percent of them would have a 15 or greater point discrepancy. If we found all persons with a Verbal IQ of 130, approximately 40 percent would meet the 15 point criterion, and so on. Notice that if we found all students with an IQ of 85, only approximately three to four percent of the population would have a severe discrepancy. Thus, a major limitation of the standard score comparison procedure to determine a severe discrepancy is that it is easier to obtain a severe discrepancy as the IQ level goes up (i.e., as you go up each column of Table 1), and as the correlation between IQ and achievement goes down (i.e., as you go across each row from left to right).

The procedure is therefore discriminatory in that all persons do not have an equal chance of having a severe discrepancy, depending upon their IQ level and the IQ test that is used. In essence, persons with above average and below average IQ scores are discriminated against, since, in the former case, a disproportionately large number will be identified as having a severe discrepancy, and, in the latter case, a disproportionately small number will be identified as having a severe discrepancy. Furthermore, the test of intelligence that is used can also be a biasing factor; i.e., as the correlation between IQ and achievement increases, fewer individuals will be selected as having a severe discrepancy when a single value is used as criterion.

The fourth procedure, which employs regression and standard error of estimate procedures, is designed to correct the limitations of the third model. This procedure corrects for regression error and uses standard deviation of the difference values to more accurately reflect the statistical nature of the population, with respect to the severe discrepancy issue.

As predictor values (IQ) are above or below the mean, the criterion values (achievement scores) tend to be closer (i.e., regress) to the mean. This is the reason why a direct comparison of standard scores yields an inequitable proportion of individuals with severe discrepancies. Depending on the correlation between the ability and achievement measures used, the effects of regression may be more or less significant. A table of correlations is usually used to correct for regression error (see Table 2).

Using this procedure permits the identification of the same proportion of persons as having a severe discrepancy regardless of their IQ level. It is a much more equitable procedure. However, there will still be some inequity based on the actual IQ test that is used. This is due to the fact that the size of the standard deviation of the difference for various IQ and achievement tests varies depending upon the correlation between them. For example, the standard error of estimate (SEest) (i.e., the standard deviation of the difference) between Performance IQ and achievement is approximately 13 points, the SEest between Verbal IQ and achievement is approximately 12 points, and the SEest between the Aptitude Clusters and academic achievement is approximately 11 points. Thus, one of the best

ways to determine the size of a discrepancy is to use a multiple of the SEest values. Some districts, for example, use 1.5 x SEest, thus resulting in a severe discrepancy values of 16 points when the Woodcock-Johnson Tests of Cognitive Ability are used, 18 points when Verbal IQ or Full Scale IQ from the WISC-R are used, and 20 points when Performance IQ from the WISC-R is used.

By using this two step procedure (first regressing the score and then utilizing the SEest values) the same proportion of individuals will be determined to have a severe discrepancy regardless of the IQ level of the subject, and the actual IQ test that is used.

If one is interested in determining the statistical significance of the differences between scores before using this regression procedure (as many are), Table 3 presents a table of differences which are considered significant when taking into account the respective reliabilities of the two measures.

Some Limitations. While the standard error of difference scores and the general guidelines can provide assistance for the determination of severe discrepancy, they have limitations, as well as advantages, that need to be acknowledged and considered.

One advantage of the use of these parameters is that they provide a relatively simple mechanism by which the amount of test error can be considered. Since the parameters consider the reliabilities of the test instruments being compared, the amount of score difference that is necessary for statistically significant differences is established. A second advantage is that by using the procedure, a team has access to a method for determining the proportion of a population which is to be determined eligible for services.

The limitations of this procedure are real, however, and need to be carefully considered. It should first be acknowledged that while Table 3 considers the degree to which two scores need to differ to be significantly different (considering the reliabilities of the tests), it does not address all of the sources of error in the determination of the standard error of difference. For example, the table does not consider the variable correlations of the tests being compared or the fact that the two tests being compared have been standardized on different normative samples, during different years, and possibly during different times of the year. Related to this issue is the fact that the different scores from Table 3 vary with respect to the reliabilities of the test instruments used. As an example, an 11.6 point difference is required when the reliabilities of the tests are .70, but only a 3.0 point difference is required when the reliabilities of the tests are .98. As a result, it is possible to obtain a statistically significant difference between scores of two tests with high reliabilities that actually do not have educational importance or significance. And so, while a three to five point difference may in some cases be statistically significant, such a difference would usually not be interpreted as a severe discrepancy with educational significance.

There cannot be a rigid criterion level for the determination of "severe discrepancy." This is necessary since the standard error of the differences between test scores vary with respect to the reliabilities of the tests and procedures used to determine ability level and achievement. To the degree possible, the IEPC should try to obtain a fairly accurate idea of whether a discrepancy between ability level and achievement is the result of chance, or a true difference between scores. Table 3 indicates the approximate standard error of difference, expressed in standard score units (average=100,

standard deviation=15), when the reliability coefficient of each measure is known. Thus, if two instruments are used which have reliability coefficients of .80, the difference between the two would need to be greater than 9.5 standard score points, before the difference between them was greater than the standard error of their difference. On the other hand, if the tests had lower reliability coefficients (e.g.,.70), a difference of nearly 12 standard score points would be necessary to establish a significant difference. When the difference between two compared scores is greater than the standard error of difference, the probability is high that the scores are statistically different.

Keeping these limitations in mind, Table 3 and the guidelines should be viewed only as general parameters which need to be supported by thoughtful judgment by the IEPC. The parameters have been included in this document to provide some specificity and consistency in the determination of severe discrepancy; but the importance of the use of flexible, thoughtful judgment cannot be overemphasized. Judgment by the IEPC is essential to interpret the educational importance and relevance of the information obtained. The sole and indiscriminate use of the difference scores in Table 3 is not recommended.

It should also be kept in mind that the establishment of a severe discrepancy, by itself, is not sufficient to certify a student "learning disabled." The major emphasis of this section is to suggest procedures for establishing intra-individual analysis of a student's performance in cognitive and achievement areas. Other factors in the L.D. definition must also be considered (e.g., is the problem primarily a problem of sensory impairment, mental retardation, emotional disturbance, environmental, cultural or economic disadvantage; has the youngster had appropriate educational opportunity; are special education programs and services necessary to correct the discrepancy?) Finding out whether there is a severe discrepancy is only one part of the identification process.

It is important to emphasize the point that severe discrepancy is only one component of the LD determination process. That is, presence of a severe discrepancy is necessary, but not sufficient, for the identification of LD. Other criteria, such as need for special education services, adequate educational opportunity, and the absence of the exclusionary criteria as primary causative factors must also be met.

Table 1. Estimated Percentage of Students Who Would Meet a Discrepancy of 15 Standard Score Points Between Tests of Intelligence and Achievement

Intelligence	Achievement	.7	.6	.5
130	115	29%	40%	50%
115	100	15%	23%	27%
100	85	8%	11%	13%
85	70	3%	4%	4%
70	55	1%	1%	1%

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Table 2. Correlation between I. Q. and Achievement

	(16) .7(a)	(18) .6(b)	(20) .5(c)		(16) .7(a)	(18) .6(b)	(20) .5(c)
130	121	118	115	100	100	100	100
129	120	117	115				
128	120	117	114	99	99	99	100
127	119	116	114	98	99	99	99
126	118	116	113	97	98	98	99
				96	97	98	98
125	118	115	113	95	97	97	98
124	117	114	112				
123	116	114	112	94	96	96	97
122	115	113	111	93	95	96	97
121	115	113	111	92	94	95	96
				91	94	95	96
120	114	112	110	90	93	94	95
119	113	111	110				
118	113	111	109	89	92	93	95
117	112	110	109	88	92	93	94
116	111	110	108	87	91	92	94
				86	90	92	93
115	111	109	108	85	90	91	93
114	110	108	107				
113	109	108	107	84	89	90	92
112	108	107	106	83	88	90	92
111	108	107	106	82	87	89	91
				81	87	89	91
110	107	106	105	80	86	88	90
109	106	105	105				
108	106	105	104	79	85	87	90
107	105	104	104	78	85	87	89
106	104	104	103	77	84	86	89
105	104	103	103	76	83	86	88
				75	83	85	88
104	103	102	102				
103	102	102	102	74	82	84	87
102	101	101	101	73	81	84	87
101	101	101	101	72	80	83	86
				71	80	83	86
100	100	100	100	70	79	82	85

(a) W-J Rdg. Apt. Cluster
W-J Math Apt. Cluster
W-J Written Lang. Apt. Cluster

(b) WISC-R VIQ & FSIQ
WAIS-R VIQ & FSIQ
WPPSI VIQ & FSIQ
Standard Binet

(c) WISC-R PIQ
WAIS-R PIQ
WPPSI PIQ
McCarthy GCI, TONI, K-ABC

Use of regressed scores with the W-J and WJ-R aptitude clusters is necessary only when they are compared to achievement tests other than from the W-J and WJ-R, since the Achievement-Aptitude Profile automatically corrects for regression error.

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Table 3 Standard Error of Differences in Standard Score Units*

	.98	.96	.94	.92	.90	.88	.86	.84	.82	.80	.78	.76	.74	.72	.70
.98	3.0	3.8	4.2	4.8	5.3	5.6	6.0	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6
.96	3.8	4.2	4.8	5.3	5.6	6.0	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7
.94	4.2	4.8	5.3	5.6	6.0	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0
.92	4.8	5.3	5.6	6.0	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3
.90	5.3	5.6	6.0	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5
.88	5.6	6.0	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8
.86	6.0	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9
.84	6.3	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2
.82	6.8	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2	10.4
.80	7.1	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2	10.4	10.7
.78	7.4	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2	10.4	10.7	10.8
.76	7.7	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2	10.4	10.7	10.8	11.0
.74	8.0	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2	10.4	10.7	10.8	11.0	11.3
.72	8.3	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2	10.4	10.7	10.8	11.0	11.3	11.4
.70	8.6	8.7	9.0	9.3	9.5	9.8	9.9	10.2	10.4	10.7	10.8	11.0	11.3	11.4	11.6

* Adapted in modified form from Hanna, Dyck & Holen, 1979.

Appendix F

Exclusionary Clause Elaborations

While only four general areas have been suggested by the rules to determine whether or not a student's severe discrepancy is primarily due to a learning disability, numerous factors must ultimately be considered. A Checklist for examining each learner's history and performance in school has addressed each of these four major areas, outlining particular problems that could warrant closer examination (see Appendix G).

Visual, Hearing, Motor Handicap or Neurological Dysfunction?

The nature of a learning disability is such that it is frequently associated with a neurological dysfunction that has resulted in a partial blockage of some basic psychological processes, particularly the broad category described as "information processing." Since Learning Disabilities has historically identified itself as a handicap area beyond those previously identified (particularly the physical/motor and sensory-deficit areas), it stands to reason that no child with another primary handicap would also be identified as learning disabled.

For this reason, two areas that should be investigated in problematic cases are the possible presence of primarily a sensory or a motor impairment. The guidelines for identifying a child as being handicapped under these two areas have already been outlined in the existing Special Education Rules and Regulations for Michigan. No child should be excluded from learning disabilities services if his or her severe discrepancy is primarily due to a neurological dysfunction that has resulted in inadequate school performance. The concern here is for children whose neuro-motor integration is essentially at fault and who require essential services beyond the confines of learning disability programs.

Mental Impairment?

Any student who can be identified as having a mental impairment according to current Michigan guidelines for Special Education services is not eligible for a learning disabilities program. Certainly, the cross-placement of such children into programs for the learning disabled has occurred, but with questionable results. However, P.L. 94-142 has provided the authority for diagnosticians and educators to plan significantly different programs for these two categories of learners. One useful reference point for examining this area of the Exclusionary Clause is that with the student with mental impairment, performance is more closely in line with his or her assessed ability, while with the student with a learning disability it is not. As a result, the real discrepancy for the youngster who is mentally impaired is between his ability level and that of his more normal peers.

The Checklist in Appendix G describes several areas that should be closely examined to determine whether or not a child should be considered for exclusion from learning disability services due to a mental impairment. Fortunately, exclusion from one area forces inclusion in another; educational services are still usually guaranteed.

Emotional Impairment?

Historically it has been difficult to differentially diagnose emotional impairment and learning disabilities, unless the condition is of a rather severe nature. While each handicap area has always asserted its own criteria for identification, these seem to hold true only at the extremes: schizophrenic children can be clearly differentiated from highly adaptive dyslexic children. But as one moves closer and closer to the moderate and mild areas of these two handicaps, lines of difference become quite gray. This problem is particularly aggravated with older students who by adolescence exhibit behaviors and profiles equally valid for both areas. In such cases the multidisciplinary team should consider the interaction of academic difficulties with concomitant behaviors and the relative importance of each: Which is the primary problem requiring special attention?

It is clear that some school districts identify such students according to the type of programs that they have available, but such an approach should be discouraged if we are to adhere to the intent of the rules for special education.

Some effort will have to be put forth to decide whether a student is eligible for services for the emotionally impaired. Sources of information which might be considered are listed in the Checklist (Appendix G). These sources can provide useful information for reaching an informed decision. Again, the rule of thumb employed is to ascertain whether the severe discrepancy is linked most clearly with external factors rather than internal disruptions of basic psychological processing. There will always be some cases where such a delineation defies both the data and the combined expertise of the multidisciplinary team. In the final analysis, what is most important is the guarantee of appropriate educational and other professional services to address the effects of the handicap.

Environmental, Cultural or Economic Disadvantage?

This fourth and final area for consideration under the Exclusionary Clause poses unique problems for the multidisciplinary team. The nature of the factors to be considered has itself proven to be difficult to assess in any systematic way. The apparent reason for this area's inclusion in the law is to guarantee that students from different, complicating environments are not automatically placed in programs for the learning disabled simply because their achievement lags their assessed ability. It guarantees, for example, that children judged eligible for Title I Remedial Programs are not simply drafted into LD programs. Abuses in this area have proven to be a basis for some successful major legal challenges.

Environmental considerations suggest a careful examination of the influence of immediate school environments on the student's performance should be made. If a student has only attended school sporadically for a year or more, or has experienced constant room or teacher changes in his school history, then the severe discrepancy may be far more related to environmental than so-called "constitutional" factors. Of equal concern is the relative ability of the local school to provide the quality of educational programs necessary to stimulate the student's performance commensurate with his or her ability. Lackluster programs promote little growth in achievement.

The nature of the information being sought related to the student's family and background requires essential caution and confidentiality. This is probably the most sensitive and demanding for the team to investigate. All information contained in this area must be secured within the guidelines of the Family Rights and Privacy Act. Particular care must be taken to assure that confidential elements are not haphazardly discussed first in the context of an IEPC meeting. Family-related concerns must be discussed with discretion and caution by all members of the team. By the same token, such important information should not be avoided simply because of its complex or sensitive nature.

One area of family-related considerations that bears careful examination is that of significant family events such as death, divorce, or disorganization. Mavis Hetherington (1978) and other cognitive researchers have reported startling rises in the incidence of children developing "LD-like" symptoms in direct reaction to parental separation and divorce. Such children show a clear discrepancy between ability and performance for a period of six to ten months and then re-establish a more expected normal pattern. Events other than divorce could just as easily contribute to the appearance of "pseudo-LD" behavior patterns in the school setting. Another important consideration is that investigated by Tanis Bryan (1978) which indicates that social-communication failure by children outside their family milieu could be responsible for some LD behaviors.

Cultural and economic considerations are critical for those children from different cultural or economic backgrounds for they take into account the effect of those factors on observed school performance. The value a group gives to schooling (particularly schooling outside their own respective culture) might be a powerful influence on school achievement. More importantly, the language factor could account for marked discrepancies between ability and actual learning success for children from bilingual families.

Ultimately, consideration of whether or not any student should be excluded from special education services for the learning disabled because an identified severe discrepancy is due to environmental or cultural factors rather than "constitutional" ones is a serious matter. What is required in many cases is a careful, thorough and systematic evaluation of a particular student's environmental, cultural and economic situation by appropriate ancillary personnel, including (but not limited to) consideration of the following:

Mental Retardation

- IQ scores
- adaptive/functional behavior
- cultural/language barriers
- observation of student

Visual, Hearing, or Motor Handicaps

- medical diagnosis
- teacher observations
- school screening/health records
- physical education personnel

- parent referral
- visual and hearing testing by school
- evaluation of motor problems by occupational or physical therapist

Emotional Impairment

- social worker
- psychologist
- rating scale (such as Behavior Evaluation Scale)
- teacher reports
- systematic observation
- parent teacher survey (Achenbach Scale)
- psychiatric evaluation
- pre-referral model

Autism

- evaluation by psychologist
- referral to ISD for evaluation
- observation by school social worker, psychologist, etc.
- teacher report
- systematic observation
- parent teacher survey (Achenbach Scale)
- psychiatric evaluation
- pre-referral model

Environmental, Cultural, or Economic Disadvantage

- investigation by teacher, social worker, counselor, or outside agencies
- social history
- parent interviews
- performance of siblings
- presence of neurologically based problems

Adequate Educational Opportunities

- observation of transient or migrant status
- attendance records
- look at previous schooling and attendance records
- regular educational alternatives
- strategies
- alternative programs
- check if outside agencies have been involved

Summary

In general, the main rationale for the exclusionary criteria is to raise the probability that a certified individual is truly LD, and to insure that minority students or students with other types of problems are not inappropriately included or excluded from LD certification. With this goal in mind, efforts should be made to ascertain whether the exclusionary criteria are primary or not. While there is usually not much direct information available to help with this decision, indirect information often can be helpful.

It should be kept in mind that not all four areas of the Exclusionary Clause need to be considered extensively for each student referred. The team should identify which areas might bring the exclusionary factor into play, and thoroughly reach a determination for those particular concerns. It is most likely that the Emotional Impairment and Cultural/Environmental areas pose the greatest likelihood for action under the Exclusionary Clause. Each team will have to determine for itself to what degree each of these areas will be examined on a case by case basis.

The fact that students with behavioral problems frequently appear in programs for learning disabled students indicates that full consideration is not always given to determine if such placements are appropriate or wise. The activities suggested in the Checklist do not automatically identify students as being emotionally impaired rather than learning disabled; they do, however, use the ability of a multidisciplinary team to investigate the possibility that other services might be warranted.

A complicating factor in this whole issue is the circular relationship between learning failure, the acting-out of frustration, and the need for a student to establish confidence about himself and his ability. The research literature draws a straight line between chronic learning failure and behavioral problems in the school and community settings. The concern addressed by this section of the rules considers those complications, but seeks to guarantee that children with emotional problems are not provided with seemingly parallel but inappropriate intervention.

In order to guarantee that a learner is not excluded from special education services for the learning disabled, the multidisciplinary team must present evidence that his or her severe discrepancy is not primarily related to any one of the four areas discussed above. The Checklist for assessing the applicability of the "Exclusionary Clause" to individual students outlines procedures for examining each of the four areas. It is important to note that in some cases, the determination of whether or not any of the four factors is operating may not be warranted. It is the responsibility of the team to decide which areas indeed warrant further investigation and to facilitate such examinations. In the most difficult cases, it is quite possible that all four areas need to be thoroughly examined.

Appendix G

Evaluation Checklist

This checklist is intended as a reference to document the area(s) of suspected disability relative to learning disabilities and the evaluation procedures included.

Determining Ability Level

Check the items which were used in the evaluation of the student:

- ❑ 1. General Intelligence Tests
- ❑ 2. Intra-Test Analysis (if any)
- ❑ 3. Achievement Tests
- ❑ 4 Specialized Abilities
- ❑ 5. Adaptive Behavior
- ❑ 6. Psychological Extras
- ❑ 7. Observation Techniques
- ❑ 8. Developmental/Social History

Achievement levels

Check the area(s) of suspected disability:

- ❑ I. Oral Expression
- ❑ II. Listening Comprehension
- ❑ III. Basic Reading Skills
- ❑ V. Reading Comprehension
- ❑ V. Written Expression
- ❑ VI. Mathematics Calculation
- ❑ VII. Mathematics Reasoning

Severe Discrepancy

Check the statistical factors which were considered in determining whether a severe discrepancy exists:

- ❑ Standard Error of Difference Tables
- ❑ Probability Guidelines
- ❑ Others: _____

_____

_____

Exclusionary Factors

Check if the following factors were condisered and ruled out as the primary problem:

- ❑ Sensory Impairments
- ❑ Motor Impairments
- ❑ Mental Impairment
- ❑ Emotional Impairment
- ❑ Autism
- ❑ Environmental, Cultural, Economic Disadvantage

Comments: _____

_____

Additional Observations

Parent interview conducted by _____

Comments: _____

_____

_____

Language background (e. g., influence of language and dialect on performance in the school setting:

_____

School-Related Considerations (attendance; assignment records; portfolio observations):

_____

_____

Special Services Needed

Provide evidence of what particular alternatives for education were attempted for this student. Include the results of each alternative.

Alternative Learning Strategies: _____

_____

Alternative Materials, Methods or Settings: _____

_____

Specialized Assistance in the Classroom: _____

_____

Specialized Programs: (Non-Special Education): _____

_____

Checklist Summary Sheet

Student Name: _____ ___ Initial Evaluation ___ Re-evaluation

Student's Age: _____ Grade: _____ District: _____

The following areas of the above-named student have been assessed and considered by this multidisciplinary team and have formed the basis for the determination of the student's eligibility for services for the learning disabled.

Instrument Used:

I. Student's Ability Level is: _____ _____

(by levels or estimated standard score ranges) (_____) _____

II. Student's Achievement Level in specified areas (by levels or estimated standard score ranges):

a. Oral Expression _____ _____

b. Listening Comprehension _____ _____

c. Basic Reading Skills _____ _____

d. Reading Comprehension _____ _____

e. Mathematical Calculation _____ _____

f. Mathematical Reasoning _____ _____

g. Written Expression _____ _____

III. Is there evidence of a severe discrepancy? ____ Yes ____ No

In which specific achievement areas (list): _____

IV. Can this student be excluded from Special Education Services for the Learning Disabled due to:

(a) sensory or motor handicap ____ Yes ____ No

(b) mental impairment ____ Yes ____ No

(c) emotional impairment ____ Yes ____ No

(d) environmental, cultural or economic disadvantage ____ Yes ____ No

V. Has the student been provided with appropriate educational alternatives? ____ Yes ____ No

Have such alternative approaches been documented and included in this report? ____ Yes ____ No

Are special education services now required for this student? ____ Yes ____ No

Comments:

VI. A classroom observation was completed. ____ Yes ____ No

VII. Based on the above data, this student is determined as ____ having / ____ not having a learning disability.

Appendix H

General References

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